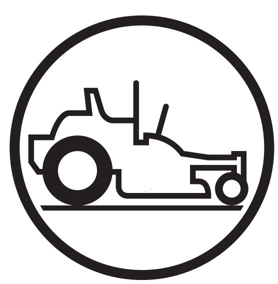
Operator's manual

EZ4216HO/968999290, EZ4217KAA/968999291,
EZ4217KAA/968999373, EZ4822BI/968999293,
EZ4822BI/968999374, EZ5221KAA/968999292,
EZ5424BI/968999294



Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

English

OPERATOR'S MANUAL

Contents

WARNING!
Failure to follow cautious operating practices can result in serious injury to the operator or other persons. The owner must understand these instructions, and must allow only trained persons who understand these instructions to operate the mower. Each person operating the mower must be of sound mind and body and must not be under the influence of any mind altering substance.

WARNING!
Engine exhaust, some of its constituents, and certain vehicle componets contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

WARNING!
Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

Introduction

Congratulations

Thank you for purchasing a Husqvarna ride-on mower. This machine is built for the greatest efficiency and rapid mowing primarily of large areas. Controls in one place and a hydrostatic transmission regulated by steering controls also contribute to the machine's performance.

This manual is a valuable document. Following the instructions (use, service, maintenance, etc.) by all who operate this machine can considerably increase the lifespan of your machine and even increase its resale value. It is also very important to follow the instructions for the safety of you and others.

If you sell your machine, be sure to give the operator's manual to the new owner.

The final chapter of this operator's manual comprises a Service Journal. Ensure that service and repair work is documented. A well kept service journal reduces service costs for the season-based maintenance and affects the machine's resale value. Take the operator's manual along when the machine is left to the workshop for service.

General

In this operator's manual, left and right, backward and forward are used in relation to the machine's normal driving direction.

Continuous dedication to improve our products require that specifications and design are subject to change without notice.

Driving and Transport on Public Roads

Check applicable road traffic regulations before transporting on public roads. If the machine is transported, you must always use approved fastening equipment and ensure that the machine is well anchored. DO NOT operate this machine on public roadways.

Towing

Do not tow this machine, it may cause damage to the drive system.

Do not tow any trailers, etc with this mower. They may jackknife or overturn causing damage to the mower and possibly serious injury to the operator.

Operating

This machine is constructed only for mowing grass on lawns and other free and even ground without obstacles such as stones, tree stubs, etc. The machine can also be used for other tasks when equipped with special accessories provided by the manufacturer, for which the operating instructions are provided in conjunction with delivery. All other types of use are incorrect. The manufacturer's directions concerning operation, maintenance, and repairs must be carefully followed.

Lawnmowers and all power equipment, can be potentially dangerous if used improperly. Safety requires good judgement, careful use in accordance with these instructions and common sense.

The machine must only be operated, maintained, and repaired by persons that are familiar with the machine's special characteristics and who are well versed in the safety instructions. Use only approved repair parts to maintain this machine.

Accident prevention regulations, other general safety regulations, occupational safety rules, and traffic regulations must be followed without fail.

Unauthorized modifications to the design of the machine may absolve the manufacturer from liability for any resulting personal injury or property damage.

INTRODUCTION

Good Service

Husqvarna’s products are sold all over the world and only in specialized retail stores with complete service. This ensures that you as a customer receive only the best support and service. Before the product is delivered, the machine has, for example, been inspected and adjusted by your retailer, see the certificate in the Service Journal in this operator’s manual.

When you need spare parts or support in service questions, warranty issues, etc., please consult the following professional:

This Operator’s Manual belongs to the machine with manufacturing number:	Engine	Transmission

Manufacturing Number

The machine’s manufacturing number can be found on the printed plate affixed to the left in the engine compartment. Stated on the plate, from the top are:

- The machine’s type designation (I.D.).
- The manufacturer's type number (Model).
- The machine’s serial number (Serial no.)

Please state the type designation and serial number when ordering spare parts.

The engine’s manufacturing number is stamped on one of the valve covers.

The plate states:

- The engine’s model.
- The engine’s type.
- Code

Please state these when ordering spare parts.

The Hydro Drive IZ gears have a barcode decal affixed to the rear of the gears.

Symbols and Decals

These symbols are found on the machine and in the operator's manual.

Study them carefully so that you know what they mean.



WARNING!
Xxxxxxx xxxx xxxxxxxx xxx x
Xxxxx xxxxxx xx.
xx xxxxxxxx xxxxx xxx xx.

Used in this publication to notify the reader of a risk of **personal injury or death**, particularly if the reader should neglect to follow instructions given in the manual.

IMPORTANT INFORMATION
Xxxxxxx xxxx xxxxxxxx xxx xxx
xxxx xxxxxx xx.

Used in this publication to notify the reader of a risk of **material damage**, particularly if the reader should neglect to follow instructions given in the manual. Used also when there is a potential for misuse or misassembly.


Reverse


Neutral


Fast


Slow

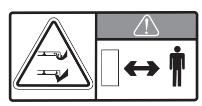

Choke

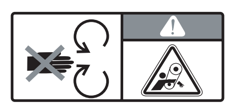

Fuel

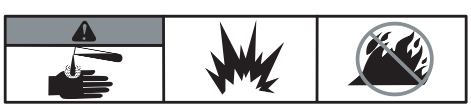

Warning!

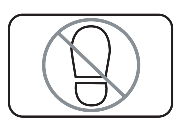

Parking brake


CE conformity marking. Only for European market


Warning! Rotating blades, keep away from the discharge deck


Do not touch rotating parts

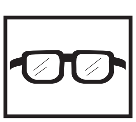

Battery acid is corrosive, explosive, and flammable

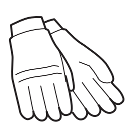

Do not stand here



Noise emissions to the surroundings in accordance with the European Union's directive. The machine's emission is stated in the chapter TECHNICAL DATA and on the decals.

Only machines for European market


Use protective glasses


Use protective gloves

SYMBOLS AND DECALS

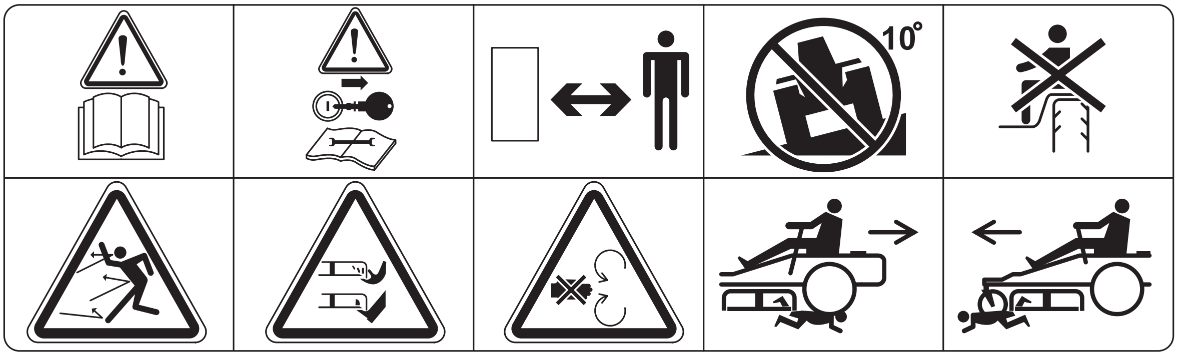
Read Operator´s Manual.

Shut off engine & remove key before performing any maintenance or repair work.

Keep a safe distance from the machine.

Use on slopes no greater than 10°.

No passengers



Whole body exposure to thrown objects.

Severing of fingers & toes.

Do not open or remove safety shields while engine is running.

Careful backing up, watch for other people.

Careful going forward, watch for other people.



Moving sharp blades under cover

Safety Instructions

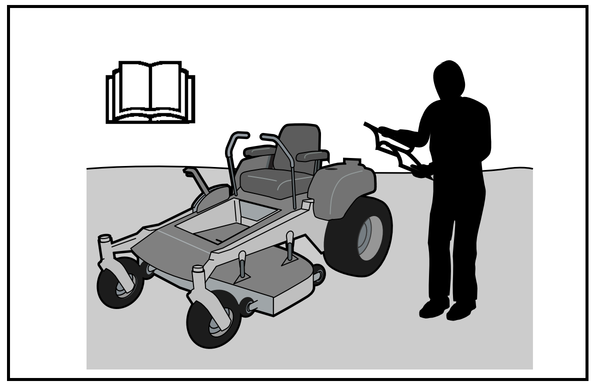
These instructions are for your safety. Read them carefully.

> **WARNING!**
> **This symbol means that important safety instructions need to be emphasized. It concerns your safety.**

IMPORTANT: THIS CUTTING MACHINE IS CAPABLE OF AMPUTATING HANDS AND FEET AND THROWING OBJECTS. FAILURE TO OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

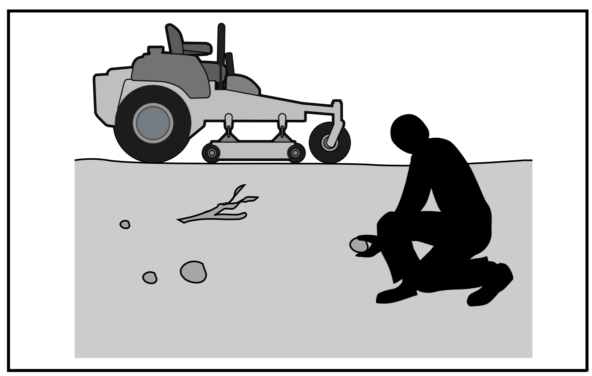
General Operation

- Read, understand, and follow all instructions on the machine and in the manual before starting.
- Do not put hands or feet near rotating parts or under the machine. Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blades.
- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Never carry passengers. The machine is only intended for use by one person.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blades when crossing gravel surfaces.
- Do not operate machine without the entire grass catcher, discharge guard, or other safety devices in place and working
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, set parking brake, stop engine, and remove keys before dismounting.



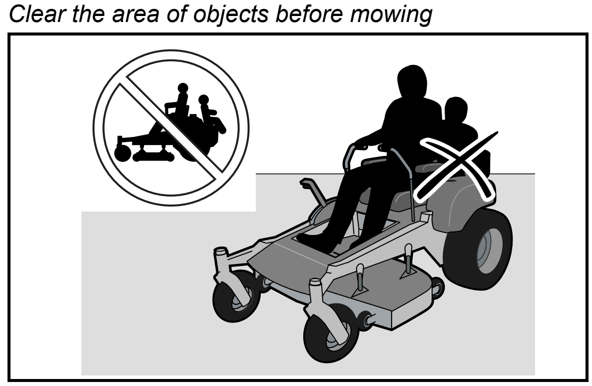
8011-512

Read the operator's manual before starting the machine



8011-513

Clear the area of objects before mowing



8011-520

Never take passengers

- Disengage blades when not mowing. Shut off engine and wait for all parts to come to a complete stop before cleaning the machine, removing the grass catcher, or unclogging the discharge guard.
- Operate machine only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.
- Always wear eye protection when operating machine.
- Data indicates that operators, age 60 years and above, are involved in a large percentage of riding mower-related injuries. These operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from serious injury.
- Follow the manufacturer's recommendation for wheel weights or counterweights.
- Never allow children or other persons not trained in the use of the machine to use or service it. Local laws may regulate the age of the user. Anyone who operates this machine should first read and understand this Operator's Manual.
- Keep machine free of grass, leaves or other debris build-up which can touch hot exhaust / engine part and burn. Do not allow the mower deck to plow leaves or other debris which can cause build-up to occur. Clean any oil or fuel spillage before operating or storing the machine. Allow machine to cool before storage.

WARNING!

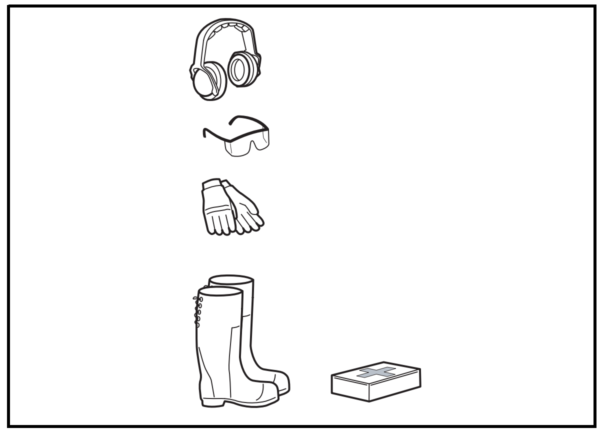
Engine exhaust and certain vehicle components contain or emit chemicals considered to cause cancer, birth defects, or other reproductive system damage. The engine exhaust contains carbon monoxide, which is a odorless, colorless, poisonous gas. Do not use the machine in enclosed spaces.

Personal Safety Equipment

WARNING!

When using the machine, approved personal protective equipment (shown in illustrations) shall be used. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your retailer for help in choosing the right equipment.

- Make sure that you have first aid equipment close at hand when using the machine.
- Never use the machine when barefoot. Always wear protective shoes or boots, preferably with steel toecaps.
- Always wear approved protective glasses or a full visor when assembling or driving.
- Always wear gloves when handling the blades.
- Never wear loose clothing that can get caught in moving parts.
- Use ear protectors to avoid damage to hearing.

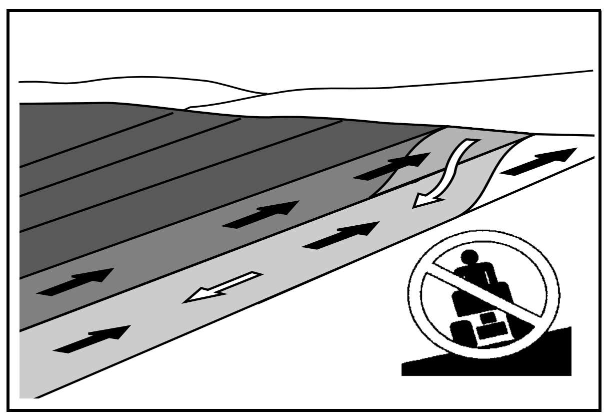


Personal protective equipment

Slope Operation

Slopes are a major factor related to loss of control and tip-over accidents, which can result in severe injury or death. Operation on all slopes requires extra caution. If you cannot back up the slope or if you feel uneasy on it, do not mow it.

- Mow up and down slopes (10 degrees maxium), not across.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Choose a low ground speed so that you will not have to stop while on the slope.
- Do not mow on wet grass. Tires may lose traction.
- Avoid starting, stopping, or turning on a slope. If the tires lose traction, disengage the blades and proceed slowly straight down the slope.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction, which could cause the machine to roll over.



Mow up and down, not side-to-side

WARNING!

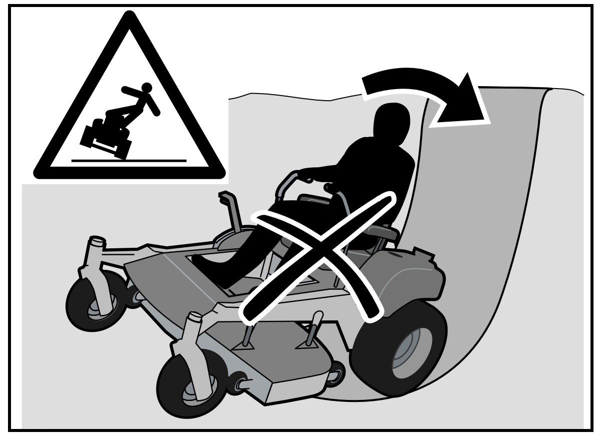
Do not drive up or down hills with slopes greater than 10 degrees. And do not drive across any slopes.

- Use extra care while operating machine with grass catchers or other attachments; they can affect the stability of the machine. Do not use on steep slopes.
- Do not try to stabilize the machine by putting your foot on the ground.
- Do not mow near drop-offs, ditches, or embankments. The machine could suddenly roll over if a wheel is over the edge or if the edge caves in.

Children

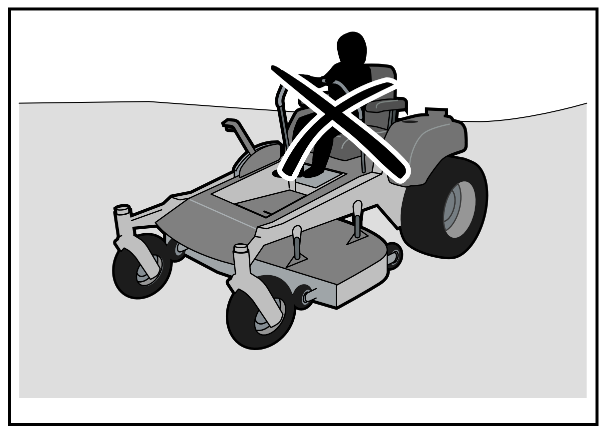
Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.

- Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator.
- Be alert and turn machine off if a child enters the area.
- Before and while backing, look behind and down for small children.
- Never carry children, even with the blades shut off. They may fall off and be seriously injured or interfere with safe machine operation. Children who have been given rides in the past may suddenly appear in the mowing area for another ride and be run over or backed over by the machine.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.



8011-519

Be extra cautious when driving on slopes



8011-517

Never allow children to operate the machine



8011-518

Keep children away from the work area

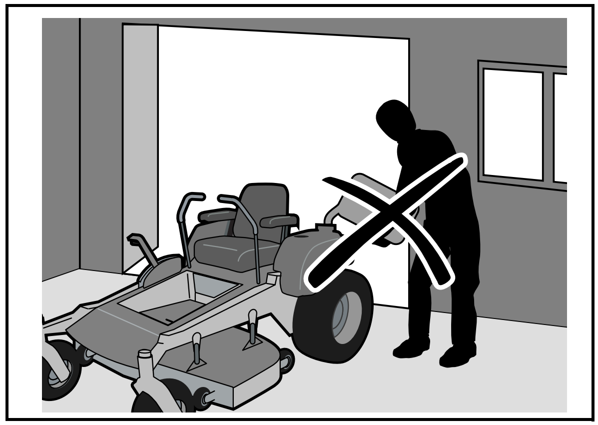
Maintenance

WARNING!
The engine must not be started when the driver's floor plate or any protective plate for the mower deck's drive belt is removed.

Safe Handling of Gasoline

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only approved gasoline container.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool at least two (2) minutes before refueling.
- Never fuel the machine indoors.
- Never store the machine or fuel container where there is an open flame, spark, or pilot light such as on a water heater or other appliances.
- Never fill containers inside a vehicle or on a truck or trailer bed with plastic liner. Always place containers on the ground away from your vehicle when filling.
- Remove gas-powered equipment from the truck or tailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately.
- Never overfill fuel tank. Replace gas cap and tighten securely.
- Do not start the engine near spilled fuel.
- Never use gasoline as a cleaning agent.
- If leaks arise in the fuel system, the engine must not be started until the problem has been resolved.
- Check the fuel level before each use and leave space for the fuel to expand, because the heat from the engine and



8011-516

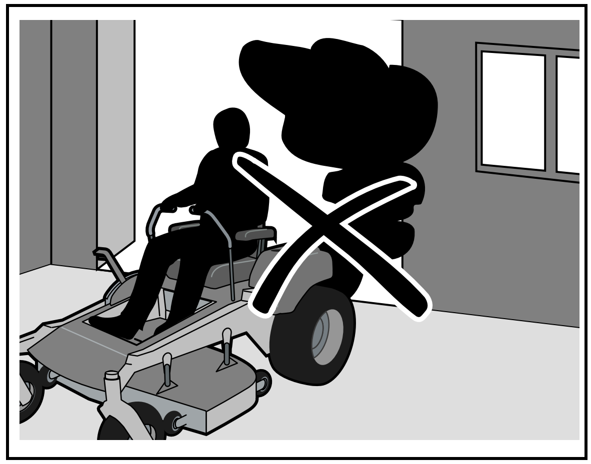
Never fill the fuel tank indoors

WARNING!
The engine and the exhaust system, become very hot during operation.
Risk for burns if touched.
Allow engine and exhaust system to cool at least two (2) minutes before refueling

the sun may otherwise cause the fuel to expand and overflow.

General Maintenance

- Never operate machine in a closed area.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage and remove any fuel-soaked debris. Allow machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before restarting.
- Never make any adjustments or repairs with the engine running.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer’s recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.
- Maintain or replace safety and instruction labels, as necessary.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven with defective or unmounted protective plates, protective cowlings, safety switches, or other protective devices.
- Do not change the settings of governors and avoid running the engine with overly high engine speeds. If you run the engine too fast, you risk damaging the machine components.
- Be very careful when handling battery acid. Acid on skin can cause serious corrosive burns. If you spill battery acid on your skin, rinse immediately with water.



8011-515

Never drive the machine in an enclosed space



Always use protective glasses when handling the battery.



WARNING!

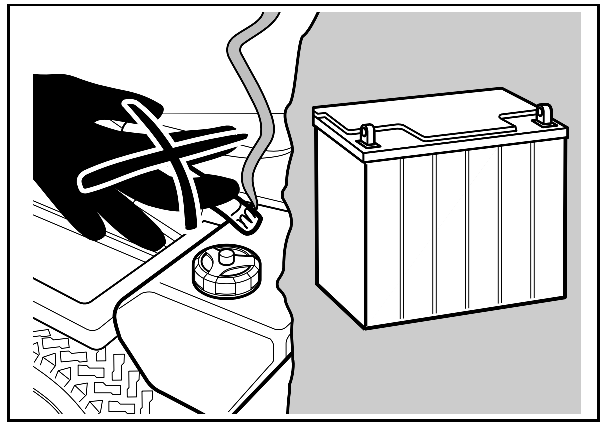
The battery contains lead and lead compounds, chemicals that are considered to cause cancer, birth defects, and other reproductive system damage. Wash your hands after handling the battery.

- Acid in the eyes can cause blindness, contact a doctor immediately.
- Be careful when servicing the battery. Explosive gases form in the battery. Never perform maintenance on the battery when smoking or near open flames or sparks. The battery can explode and cause serious injury/damage.
- Ensure that nuts and bolts, especially the fastening bolts for the blade attachments, are properly tightened, torqued and that the equipment is in good condition.
- Do not modify safety equipment. Check regularly to be sure it works properly. The machine must not be driven with defective or unmounted protective plates, protective cowlings, safety switches, or other protective devices.
- Do not change the settings of governors and avoid running the engine with overly high engine speeds. If you run the engine too fast, you risk damaging the machine components.
- Sparking can occur when working with the battery and the heavy cables of the starter circuit. This can cause battery explosion, fire or eye injury. Sparking in this circuit can not occur after the chassis cable (normally negative, black) is removed from the battery.

WARNING!

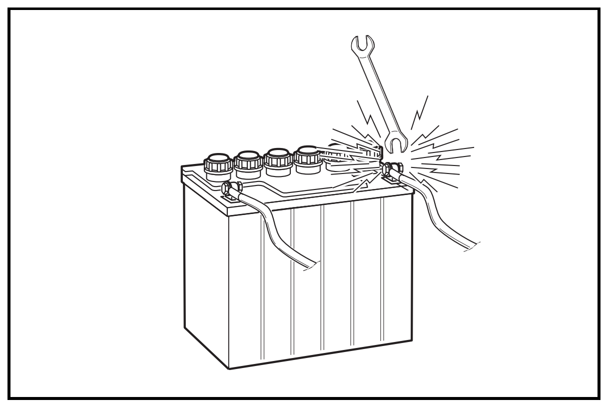
Avoid electrical sparking and its consequences by the following routines:

- Use protective goggles.
- Ensure that the fuel filler cap is mounted tightly and no flammable substances is stored in an open vessel.
- Never work with the starter circuit if there is spilled fuel.
- Disconnect the chassis cable from the battery first and reconnect it last.
- Do not make a bridge short circuit across the starter relay to run the starter.
- Never use the machine indoors or in spaces lacking proper ventilation. The exhaust fumes contain carbon monoxide, an odorless, poisonous, and lethal gas.
- Stop and inspect the equipment if you



6003-009

Do not smoke when performing maintenance on the battery. The battery can explode and cause serious injury/damage



8009-728

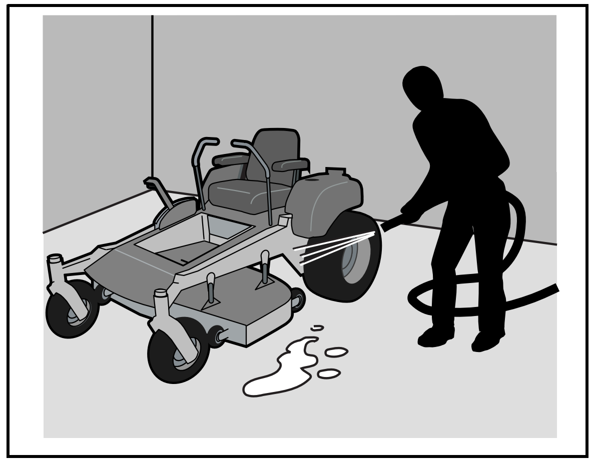
Risk of sparking

run over or into anything. If necessary, make repairs before starting.

- Never make adjustments with the engine running.
- The machine is tested and approved only with the equipment originally provided or recommended by the manufacturer. Only use approved repair parts for the machine.
- The blades are sharp and can cause cuts and gashes. Wrap the blades or use protective gloves when handling them.
- Check the parking brake's functionality regularly. Adjust and service as necessary.
- The mulch blades should only be used in familiar areas when higher quality mowing is desired.
- Reduce the risk of fire by removing grass, leaves, and other debris that may have accumulated on the machine. Allow the machine to cool before putting it in storage.
- Regularly clean deck and underside of deck, avoid spraying engine and electrical components with water.

Transport

- The machine is heavy and can cause serious crushing injuries. Be extra cautious when it is loaded on or unloaded from a vehicle or trailer.
- Use an approved trailer to transport the machine. Activate the parking brake, turn off the fuel supply, and fasten the machine with approved fastening devices, such as bands, chains, or straps, when transporting.
- Do not operate this machine on public roadways.
- Check and abide by local traffic regulations before transporting the machine on any road.
- Do not tow this machine, it may cause damage to the drive system.
- Do not tow any trailers, etc. with this mower. They may jackknife or overturn causing damage to the mower and possibly serious injury to the operator.



8011-644

Clean the machine regularly

IMPORTANT INFORMATION

The parking brake is not sufficient to lock the machine in place during transport. Ensure that the machine is well fastened to the transport vehicle. Always reverse the machine onto the transport vehicle to avoid tipping it over.

Customer responsibilities

- Read and observe the safety rules.
- Follow a regular schedule in maintaining, caring for and using your mower.
- Follow the instructions under "Maintenance” and "Storage” sections of this owner’s manual.
- This machine has no brain. Use yours!

WARNING!

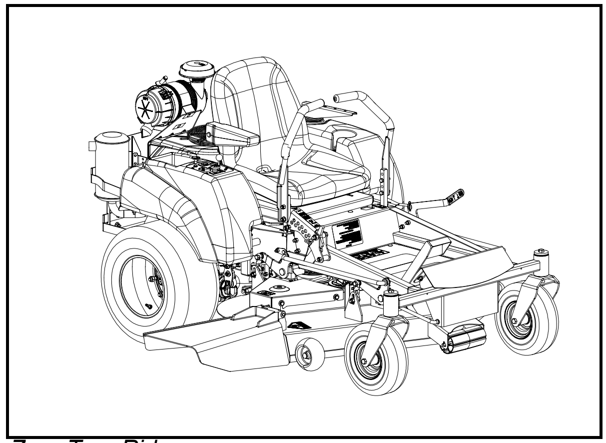
This mower is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, bush-covered or grass-covered land unless the engine’s exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

A spark arrester for the muffler is available through your authorized Husqvarna dealer.

Controls

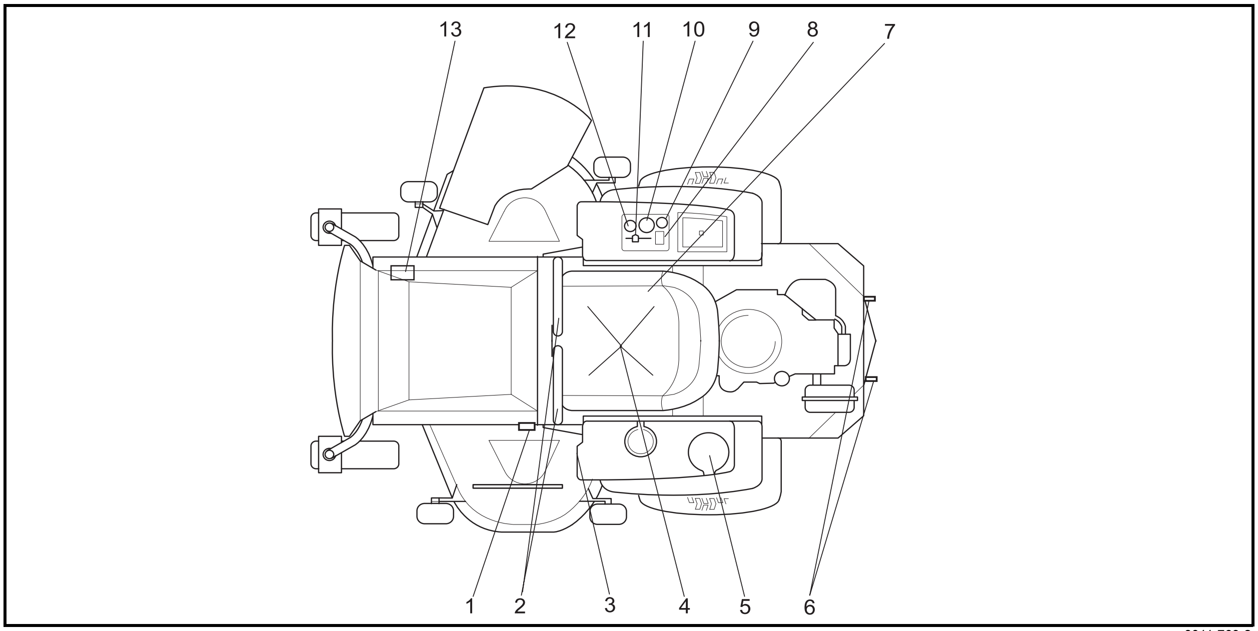
This operator's manual describes the Husqvarna Zero Turn Rider. The rider is fitted with either a Briggs & Stratton, Kawasaki, or Honda engine.

Transmission from the engine is made via two belt-driven hydraulic transaxles, one for each drive wheel. Using the left and right steering controls, the flow is regulated and thereby the direction and speed.



Zero Turn Rider

Control Locations



Locations of the controls

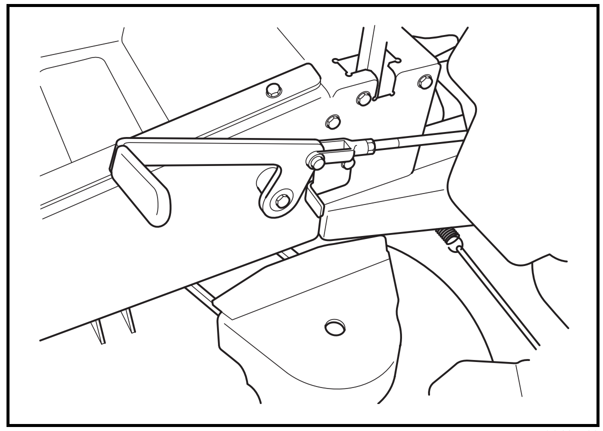
		Page			Page
1.	Parking brake	17	8.	Hour meter	21
2.	Motion control levers	16	9.	Choke control	21
3.	Fuel shut off valve	18	10.	Ignition switch	21
4.	Seat adjustment bolts	18	11.	Throttle control	22
5.	Fuel tank cap	19	12.	Blade switch	22
6.	By pass linkage	19	13.	Cutting height pedal	23
7.	Fuses	20			

1. Parking Brake

IMPORTANT INFORMATION

The machine must be absolutely standing still when applying the parking brake.

The parking brake is found on the left of the machine. Pull the lever backward to activate the brake and forward to release it.


8011-711

Parking brake not activated

2. Motion Control Levers

The machine's speed and direction are continuously variable using the two steering controls. The steering controls can be moved forward or backward about a neutral position. Furthermore, there is a neutral position, which is locked if the steering controls are moved outward.

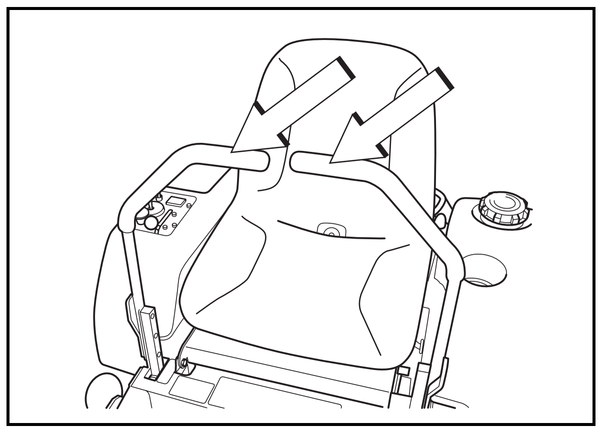
When both controls are in the neutral position (N), the machine stands still.

By moving both controls an equal amount forward or backward, the machine moves in a straight line forward or backward respectively.

In order, for example, to turn right while moving forward, move the right control towards the neutral position. The rotation of the right wheel is reduced and the machine turns to the right.

Zero turn can be achieved by moving one control backward (behind the neutral position) and carefully moving the other steering control forward from its neutral position. The rotation direction when zero turning is determined by which steering control is moved backward behind the neutral position. If the left steering control is pulled backward, the machine turns to the left. Use extra care when using this maneuver.

If the steering controls are in uneven


8011-789

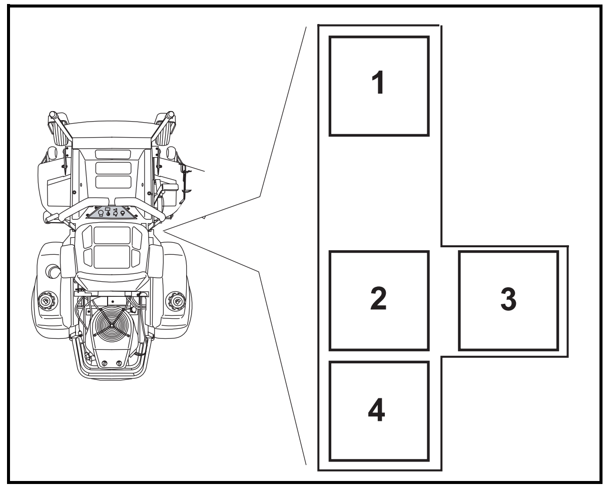
Steering controls



WARNING!

The machine can turn very rapidly if one steering control is moved much further forward than the other.

positions when standing still or do not fit in the slots for moving the controls outward, they can be adjusted.



1. Forward
2. Neutral
3. Neutral slot, Neutral lock
4. Reverse

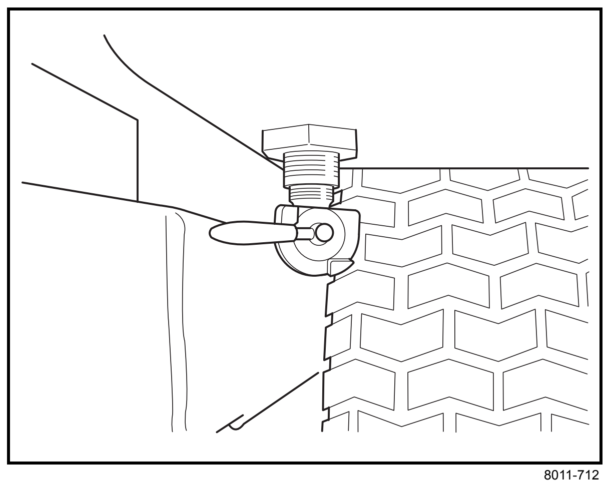
Fuel shut off valve in OFF position

Tracking

If the mower is not tracking straight, check the air pressure in both rear tires. Recommended air pressure is 15 psi. (1 bar) Tracking must be checked on a flat and level concrete or blacktop surface. If the unit still does not track straight contact your Husqvarna workshop for adjustments.

3. Fuel Shut Off Valve

The fuel shut off valve is located under the fuel tank. The valve has two positions; ON and OFF.



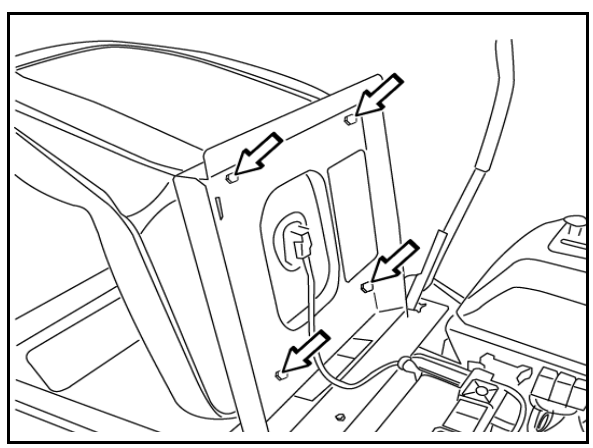
Fuel shut off valve in OFF position

4. Seat adjustment bolts

With the machine off remove the two bolts holding the seat pan down and flip the seat forward.

The seat can be adjusted lengthways. When making adjustments, loosen the four bolts under the seat pan, after which the seat can be moved backward or forward.

Once the seat is adjusted to your liking. Flip the seat back down and rebolt the seat pan to the frame.



Lengthways adjustment

5. Refueling

The machine has one fuel tank, just behind the seat. The tank volume is 5.4 gallons (20.4 liters).

The engine will run on a minimum of 85-octane unleaded gasoline (no oil mix). Environmentally adapted alkylate gasoline can be used beneficially. See also Technical Data concerning ethanol fuel. Methanol fuel is not allowed.

WARNING!

Gasoline is highly flammable. Observe caution and fill the tank outdoors (see the safety rules).

WARNING!

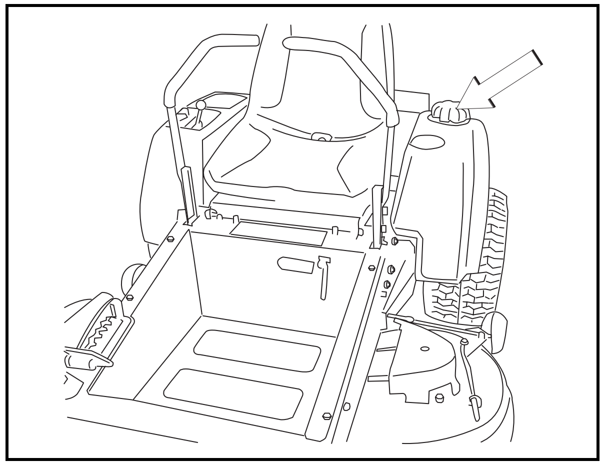
**The engine and the exhaust system, become very hot during operation.
Risk for burns if touched.**

Allow engine and exhaust system to cool at least two (2) minutes before refueling

WARNING!

Fill to bottom of filler neck. Do not overfill. Wipe off any spilled oil or fuel. Do not store, spill or use gasoline near an open flame.

When operating in temperatures below 32° F. (0° C.), use fresh, clean winter grade gasoline to help insure good cold weather starting.



8011-761

Fuel tank

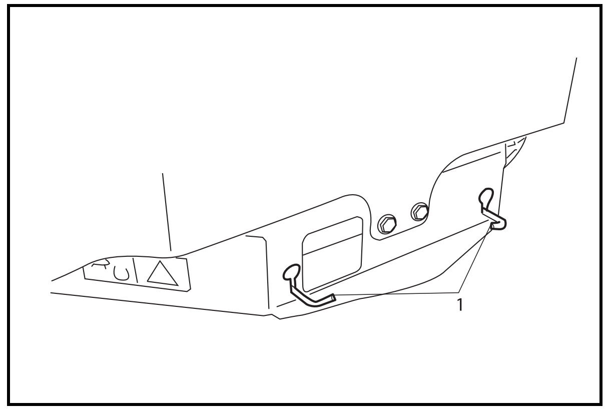
IMPORTANT INFORMATION

Experience indicates that alcohol blended fuels (called gasohol, ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel the next season. See Storage Instructions for additional information. Never use engine or carburetor cleaners in the fuel tank or permanent damage may occur.

6. By pass linkage

When pushing or pulling the mower, be sure to engage the IZT (Integraded Zeroturn Transaxle) bypass linkages. The IZT bypass linkages are located on the rear of the frame, below the rear engine guard.

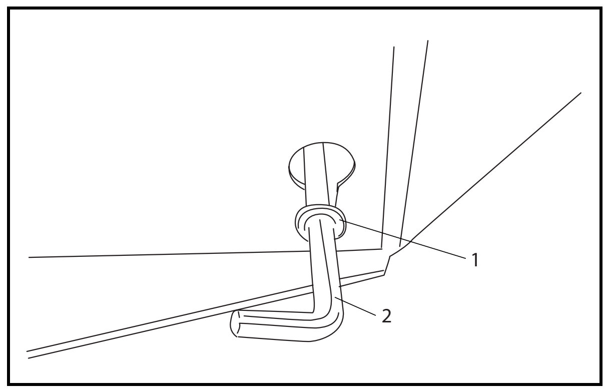
- Raise the deck into the highest cutting position.



1. IZT Bypass linkage

Bypass linkages

- Pull the IZT bypass linkages out and into the slots and release so that it is held in the bypass position.
- To reengage the IZT's to drive, reverse the above procedure.



1. Head outside of rear deck
2. IZT Bypass linkage in bypass position

Bypass position

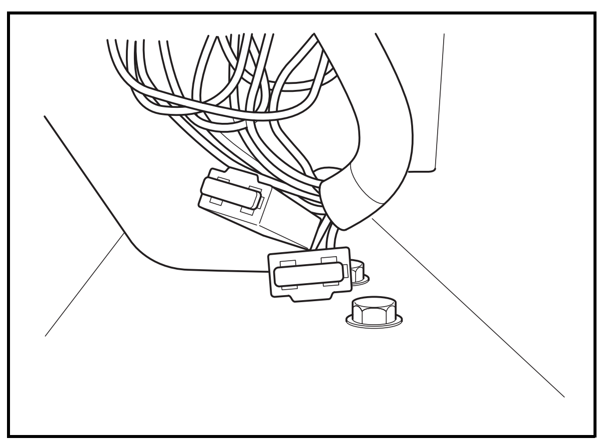
7. Fuses

The fuses are located in a holder at the right hand side of the battery compartment. They are flat pin fuses of the same type used in automobiles.

There are two fuses.

Fuse ratings and functions:

- 20 A, Primary fuse.
- 7.5 A, Mower deck coupling.

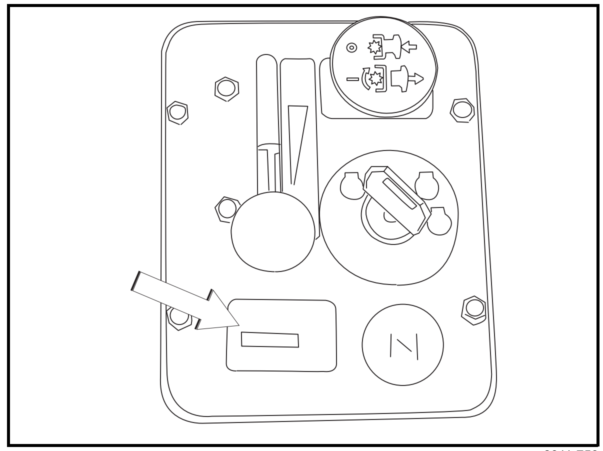


Fuses

8. Hour Meter

The hour meter displays the total operating time.

It will flash CHG OIL (Change Oil) at 50 hour intervals. The flash duration is one hour before and one hour after the interval. The CHG OIL icon will come on and shut off automatically. The hour meter can not be manually reset.



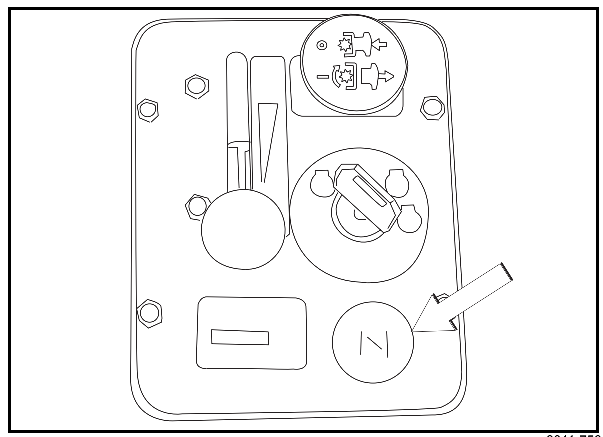
8011-759

Hour meter

9. Choke Control

The choke control is used for cold starts in order to provide the engine with a richer fuel mixture.

For cold starts the control should be pulled out.



8011-756

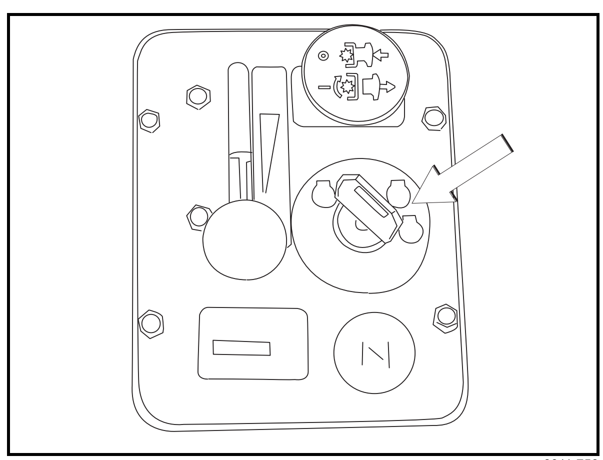
Choke control

10. Ignition Switch

The ignition key is placed on the control panel and is used to start and stop the engine.

IMPORTANT INFORMATION

Do not run the starter for more than five seconds each time. If the engine does not start, wait about 10 seconds before re-trying.



8011-758

Ignition key

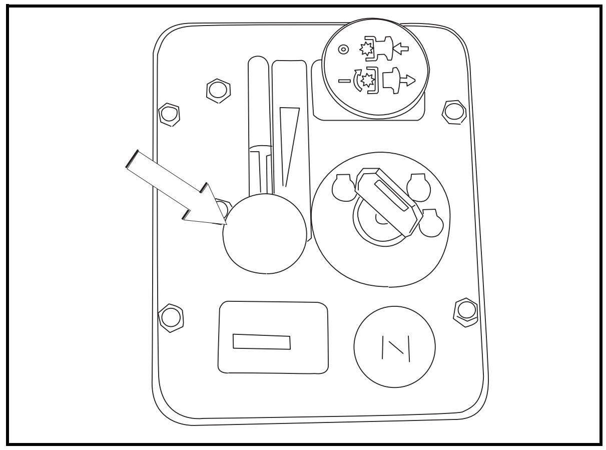
11. Throttle Control

The throttle control regulates the engine speed and thereby the rate of rotation of the blades, assuming the blade switch is pulled out, see Engaging the Mower Deck.

In order to increase or decrease the engine speed, the control is moved forward or backward respectively.

Avoid idling the engine for long periods, as there is a risk of fouling the spark plugs.

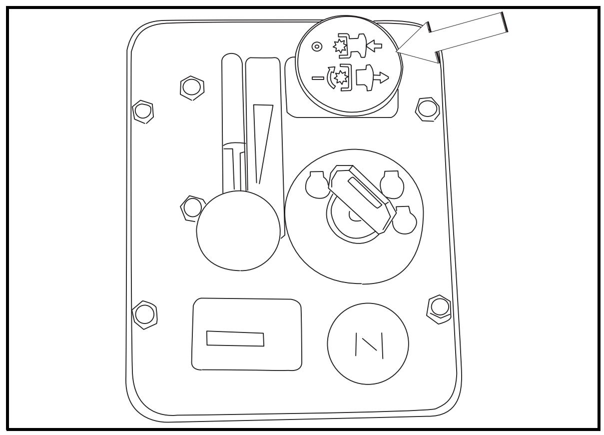
USE FULL THROTTLE WHEN MOWING, for best mower performance and battery charging.


8011-757

Throttle control

12. Blade switch

In order to engage the mower deck, pull the knob out; the mower blades are disengaged when the knob is depressed.

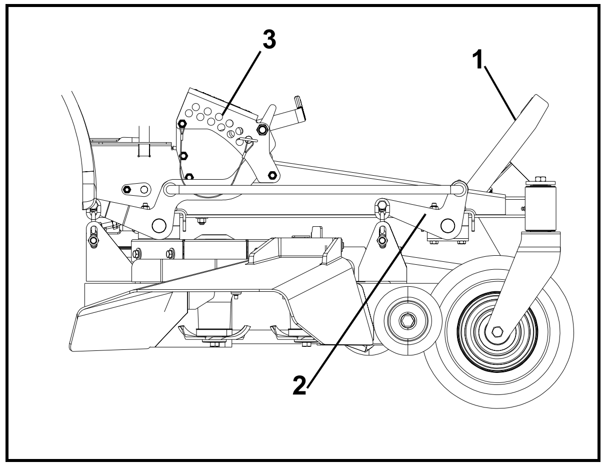

8011-760

Blade Switch

13. Cutting height pedal

The cutting deck height is obtained by pressing the foot pedal lift arm forward and releasing the transport latch. Then lower the deck to the preset height. To raise the deck push forward on the foot pedal lift arm until the transport latch locks. The cutting height range is from 1 1/2" (38 mm) to 4 1/2" (114 mm) in 1/4" (6.4 mm) increments. The heights are measured from the ground up to the blade tip with the engine not running.

To change cutting heights move the pin on the cutting height plates to the desired height of cut.



1. Foot pedal
2. Lift arm
3. Height plate

Cutting height pedal

IMPORTANT INFORMATION

In order to obtain an even cutting height it is important that the air pressure in all four tires is the same 15 psi (1 bar).

Accessories

For mulching, there is a BioClip attachment available. This is mounted underneath the mower deck and consists of control plates and BioClip blades.

Operation

Read "Safety Instructions" section and following pages, if you are unfamiliar with the machine.

Training

Zero turn mowers are far more manueverable than typical riding mowers due to their unique steering capabilities.

We suggest when first operating the mower, use a reduced throttle speed and reduced ground speed by NOT moving control levers to the furthest forward or reverse positions during initial operation, or until operator becomes comfortable with controls. We also suggest first time users, or new users to ZeroTurn mowers to become familiar with the mowers movement on a hard surface, such as concrete or blacktop PRIOR to attempting to operate on turf. Until operator becomes comfortable with mower controls and zero turning capability, they may damage turf due to over aggressive maneuvers.

To move forward and backward

The direction and speed of the mowers movements is effected by the movement of the control lever(s) on each side of mower. The left control lever controls the left wheel. The right control lever controls the right wheel.

IMPORTANT INFORMATION
When control levers are in the reverse position they return to neutral when released. This may cause the mower to suddenly stop.

First time users should push mower (see "Moving by Hand" in the "Operation" section) to an open, flat area, without other people or vehicles/obstacles near by. In order to move unit under its own power, the operator must be in the seat, start engine (see " Before Starting" in "Operation" section), adjust engine speed to idle, disengage park brake, do not engage blades at this time, rotate control levers inward. As long as the control levers have not been moved forward or backwards, mower will not move. Slowly move both control levers forward slightly, this will allow mower to start moving forward in a straight line. Pull back on control levers to the neutral position and mower should stop moving. Pull back slightly on control levers, this will allow mower to start moving backwards. Push forward on control levers to the neutral position and mower should stop moving.

To turn to the right

While moving in a forward direction, pull the right lever back towards the neutral position while maintaining the position of the left lever, this will slow the rotation of the right wheel and cause the machine to turn in that direction.

To turn to the left

While moving in a forward direction pull the left lever back towards the neutral position while maintaining the position of the right lever, this will slow the rotation of the left wheel and cause the machine to turn in that direction.

To zero turn

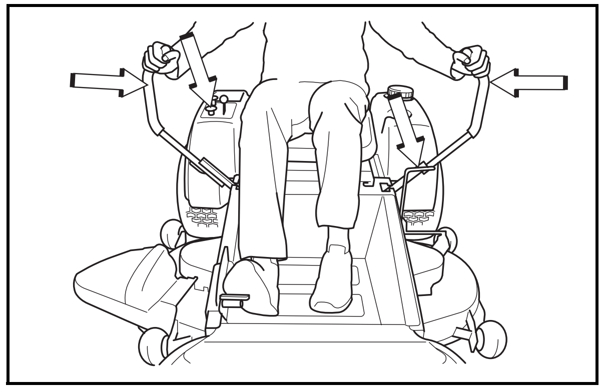
While moving in a forward direction, first pull both control levers back until the mower stops or slows dramatically. Then by alternating one lever slightly to the forward position and the other in the reverse position.

Before Starting

- Read the sections Safety Instructions and Controls before starting the machine.
- Perform the daily maintenance before starting (see Maintenance Schedule in the Maintenance section).
- Check that there is sufficient fuel in the fuel tank.
- Adjust the seat to the desired position.

The following conditions must be fulfilled before the engine can be started:

- the driver must be seated on the seat,
- the blade switch for engaging the mower blades must be depressed,
- the parking brake must be on,
- both steering controls must be in the locked (outer) neutral position.

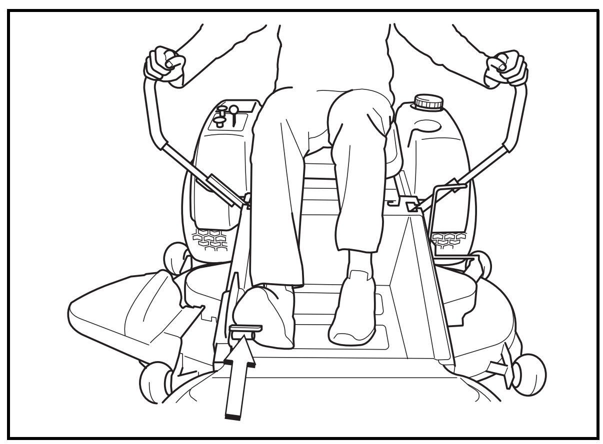


8011-718

Start conditions

Starting the Engine

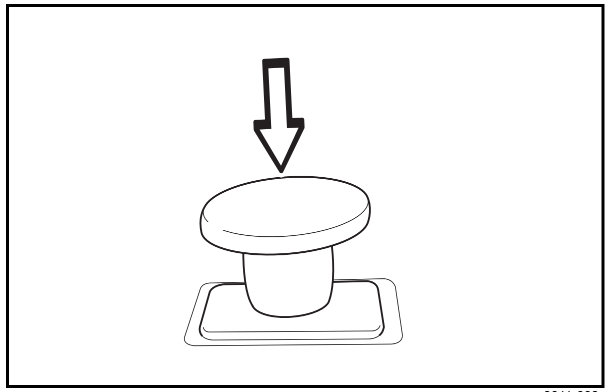
1. Sit on the seat.
2. Raise the mower deck by depressing the pedal forward to the locked position (transport position). The mower deck will latch in the transport position when the lift pedal is fully depressed.
3. Activate the parking brake.



8011-718-2

Raise the mower deck

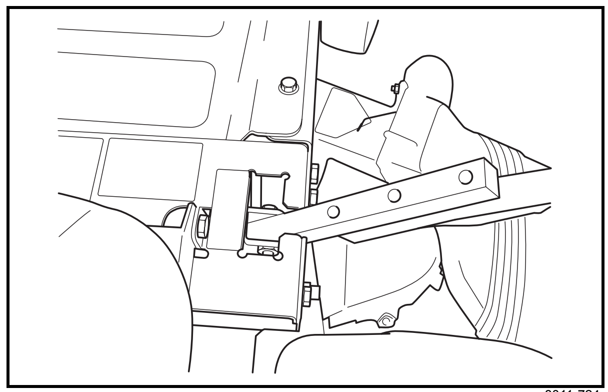
4. Disengage the mower blades by depressing the blade switch.



8011-668

Depress the control for disengaging the mower deck

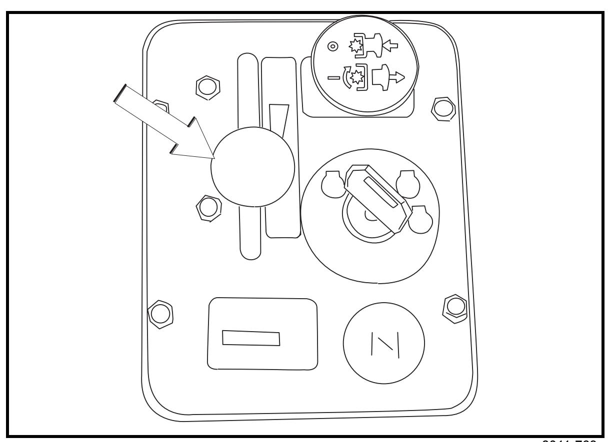
5. Move the steering controls outward to the locked (outer) neutral position.



8011-724

Steering controls in the outward, locked neutral position

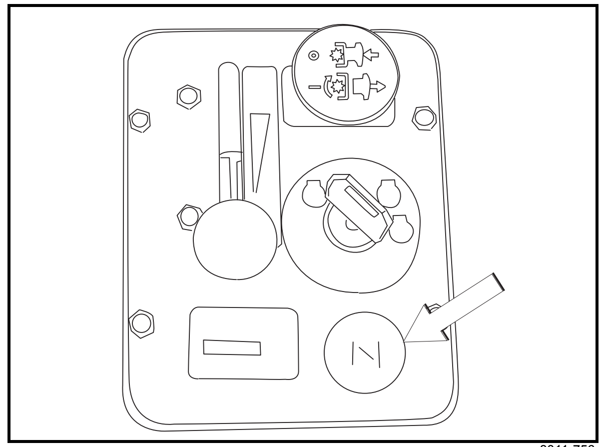
6. Move the throttle to the middle position.



8011-763

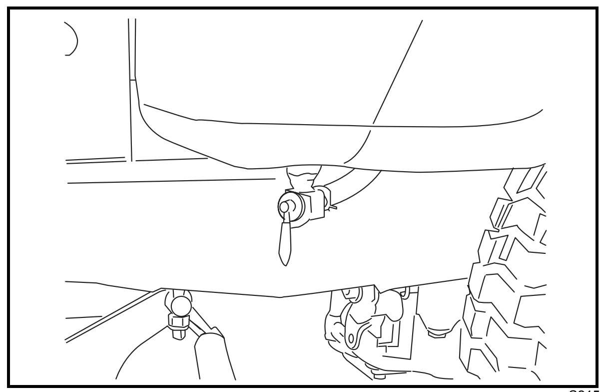
Set the throttle

7. If the engine is cold, the choke control should be pulled out to its extents.


8011-756

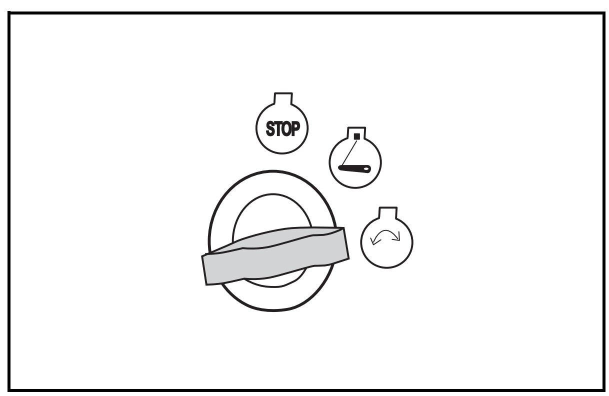
Set the choke control

8. Open the fuel shut off valve.


C215

Open the fuel shut off valve

9. Press in and turn the ignition key to the start position.



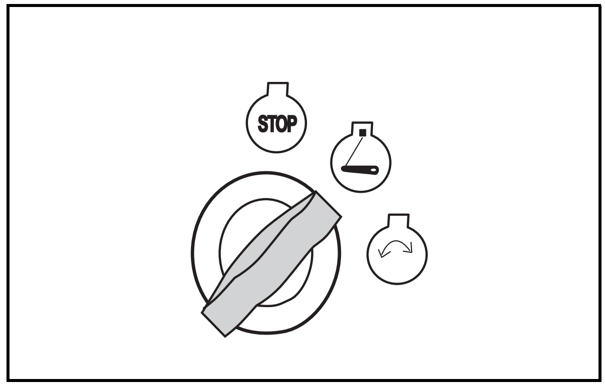
8011-742

Turn to the start position

10. When the engine starts, immediately release the ignition key back to the run position.

IMPORTANT INFORMATION

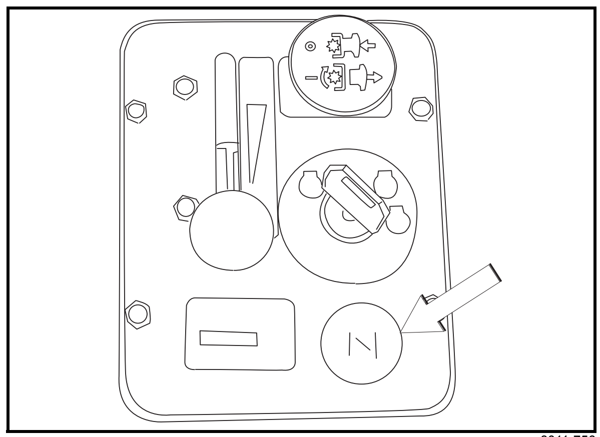
Do not run the starter for more than 5 seconds each time. If the engine does not start, wait about 10 seconds before re-trying.



8011-743

Return to run position

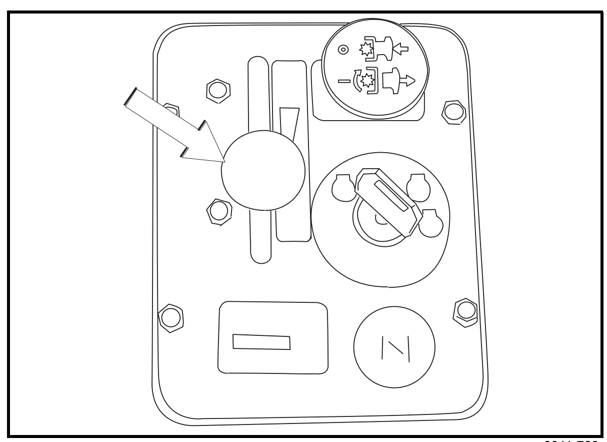
11. Press the choke control in gradually when the engine has started.



8011-756

Gradually press in the choke control

12. Set the desired engine speed with the throttle.
    Allow the engine to run at a moderate speed, “half throttle”, for 3-5 minutes before loading it too heavily.
    USE FULL THROTTLE WHEN MOWING.



8011-763

Set the engine speed

WARNING!

Engine exhaust and certain vehicle components contain or emit chemicals considered to cause cancer, birth defects, or other reproductive system damage. The engine exhaust contains carbon monoxide, which is a odorless, colorless, poisonous gas. Do not use the machine in enclosed spaces.

To start an engine with a weak battery

WARNING!
Lead-acid batteries generate explosive gases. Keep sparks, flame and smoking materials away from batteries. Always wear eye protection when around batteries.

If your battery is too weak to start the engine, it should be recharged. (See “Battery” on page 37).

If “jumper cables“ are used for emergency starting, follow this procedure:

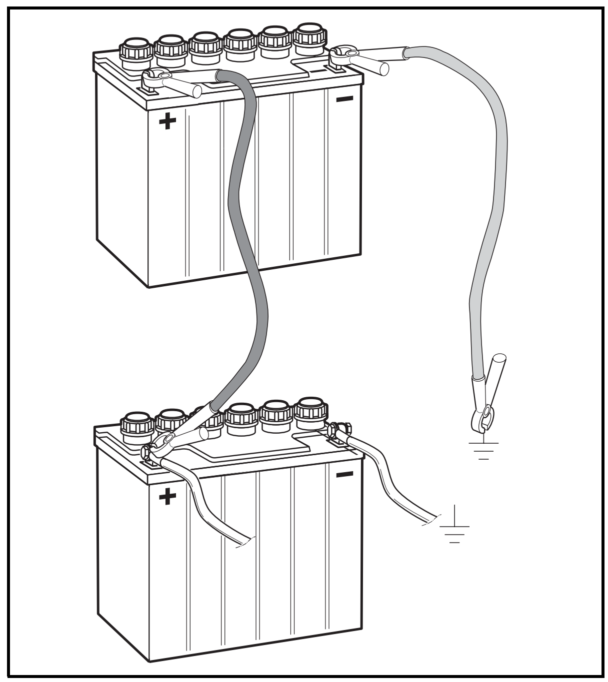
IMPORTANT INFORMATION
Your mower is equipped with a 12-volt negative grounded system. The other vehicle must also be a 12-volt negative grounded system. Do not use your mower battery to start other vehicles. Do not allow vehicles to touch when using jumper cables.

To attach jumper cables

- Connect each end of the RED cable to the POSITIVE (+) terminal on each battery, taking care not to short against chassis.
- Connect one end of the BLACK cable to the NEGATIVE (-) terminal of the fully charged battery.
- Connect the other end of the BLACK cable to a good CHASSIS GROUND on the mower with the discharged battery, away from the fuel tank and battery.

To remove cables, reverse order

- Remove BLACK cable first from chassis and then from the fully charged battery.
- Remove RED cable last from both batteries.



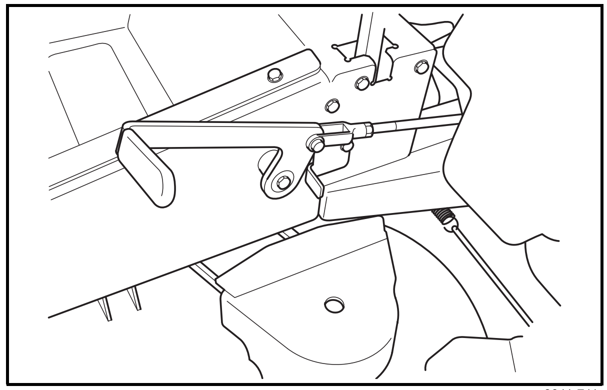
Jumper cables connection

Running

1. Release the parking brake by moving the lever forward.

   Your mower is equipped with an operator presence system. When the engine is running, any attempt by the operator to leave the seat without first setting the parking brake will shut off the engine.

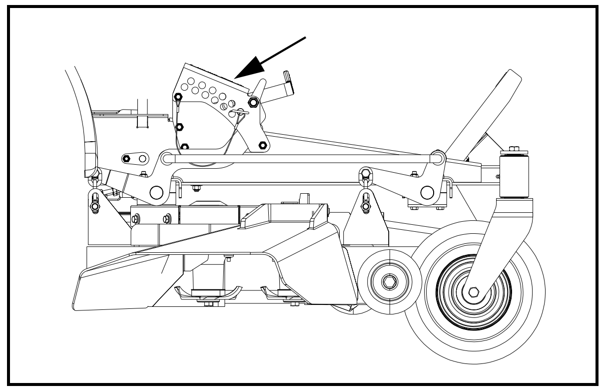
2. Move the steering controls to the neutral position (N).



8011-711

Released parking brake

3. Select the cutting height by adjusting the cutting height pin. Release latch and lower deck to set cutting height.



Cutting height selection

IMPORTANT INFORMATION

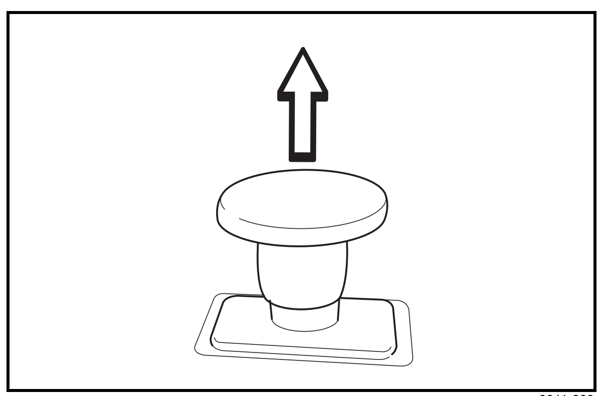
The mower deck's anti-scalp rollers should be evenly adjusted.

WARNING!

Ensure that no one is near the machine when engaging the Blade switch.

4. Engage the mower deck by pulling out the blade switch.
5. Move throttle control to full throttle.
6. The machine's speed and direction are continuously variable using the two steering controls. When both controls are in the neutral position, the machine stands still.

   By moving both controls an equal amount forward or backward, the machine moves in a straight line forward or backward respectively.



8011-669

Engaging the mower deck

In order, for example, to turn right while moving forward, move the right control towards the neutral position. The rotation of the right wheel is reduced and the machine turns to the right.

Turning on the spot can be achieved by moving one control backward (behind the neutral position) and carefully moving the other steering control forward from its neutral position.

Operating on hills

Read "Driving on Slopes" in the "Safety Instructions".

WARNING!

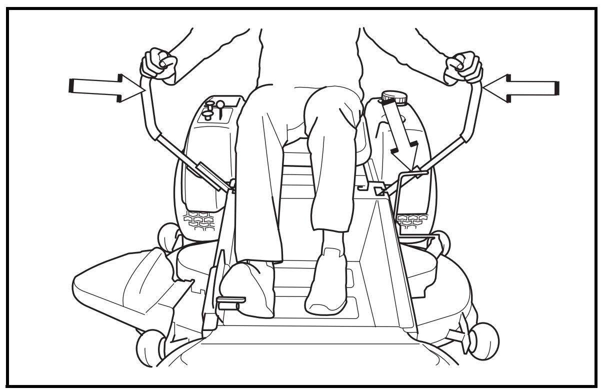
Do not drive up or down hills with slopes greater than 10 degrees. And do not drive across any slopes.

- The slowest speed possible should be used before starting up or down hills.
- Avoid stopping or changing speed on hills.
- If stopping is absolutely necessary, pull drive levers into the neutral position and push to the outside of the unit and engage the park brake.

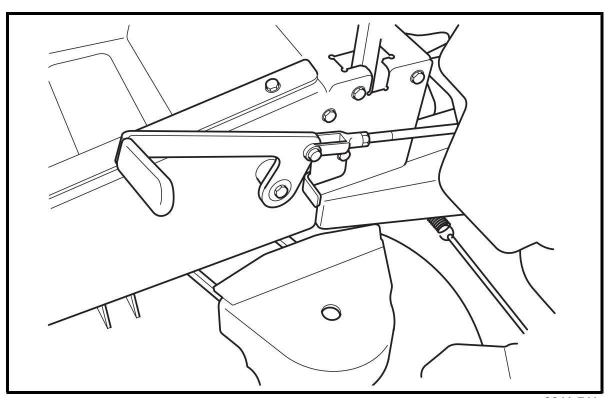
IMPORTANT INFORMATION

Control levers return to neutral when released. This may cause the mower to suddenly stop.

- To restart movement, release the park brake.
- Pull the control levers back to the center of the mower and press forward to regain forward motion.
- Make all turns slowly.



Stopping conditions



Released parking brake

Mowing Tips

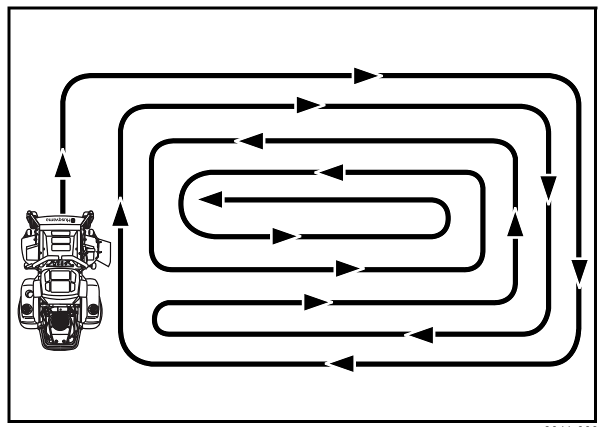
- Observe and flag rocks and other fixed objects to avoid collisions.
- Begin with a high cutting height and reduce it until the desired mowing result is attained.

  The average lawn should be cut to 2 1/2" (64 mm) during the cool season and over 3" (76 mm) during the hot months. For healthier and better looking lawns, mow often after moderate growth.

  For best cutting performance, grass over 6" (15 cm) in height should be mowed twice. Make the first cut relatively high; the second to the desired height.
- The mowing result will be best with a high engine speed (the blades rotate rapidly) and low speed (the rider moves slowly). If the grass is not too long and dense, the driving speed can be increased without negatively affecting the mowing result.
- The finest lawns are obtained by mowing often. The lawn becomes more even and the grass clippings more evenly distributed over the mown area. The total time taken is not increased as a higher operating speed can be used without poor mowing results.
- Avoid mowing wet lawns. The mowing result is poorer because the wheels sink into the soft lawn, clumps build, and the grass clippings fasten under the cowling.
- Hose the mower deck underside with water after each use. When cleaning, the mower deck should be raised into the transport position. Make sure the mower is cooled and the engine is off.
- Use compressed air to clean top surface of the deck. Avoid flooding water on top surface of deck engine or electrical components.
- When the mulching kit is used, it is important that the mowing interval is frequent.

WARNING!

Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blades.



Mowing patterns

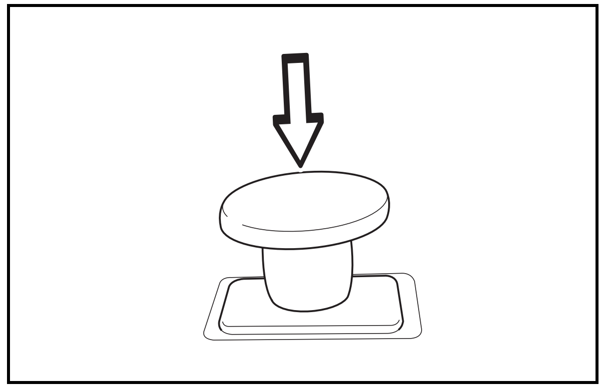
WARNING!

Never drive the rider on terrain that slopes more than 10°. Mow slopes up and down, never side-to-side. Avoid sudden directional changes.

Stopping the Engine

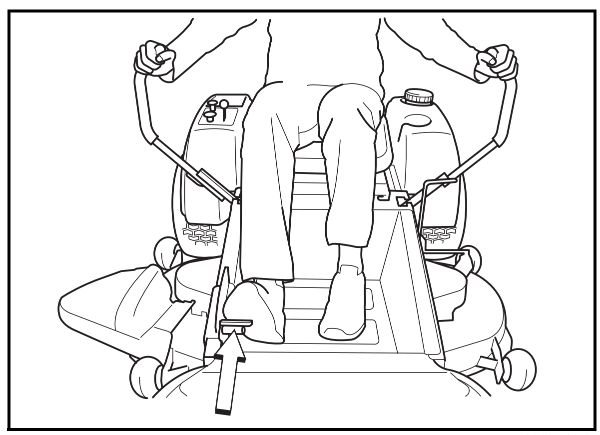
Allow the engine to idle a minute in order to attain normal operating temperature before stopping it, if it has been worked hard. Avoid idling the engine for longer periods, as there is a risk of the spark plugs fouling.

1. Disengage the mower deck by depressing the blade switch.



Disengage the mower deck

2. Raise the mower deck by depressing the pedal forward to the transport position.
3. When the machine is standing still, activate the parking brake by pulling the lever backward.
4. Move the throttle to the minimum position (tortoise symbol). Turn the ignition key to the stop position. Never use choke to stop engine.
5. Move the steering controls outward.
6. Remove key. Always remove key when leaving the mower to prevent unauthorized use.



Raise the mower deck with the pedal

IMPORTANT INFORMATION

Leaving the ignition switch in any other position than "OFF" will cause the battery to be discharged and the hour meter to accumulate hours.

Moving by Hand

WARNING!

No adjustments or maintance to be carried out unless:

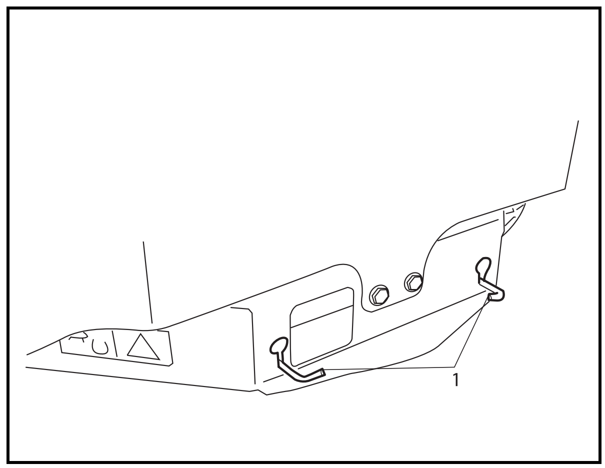
- the engine stopped,

- the ignition key has been removed,

- the parking brake is on.

When pushing or pulling the mower, be sure to engage the IZT (Integraded Zeroturn Transaxle) bypass linkages. The IZT bypass linkages are located on the rear of the frame, below the rear engine guard.

- Raise the deck into the highest cutting position.

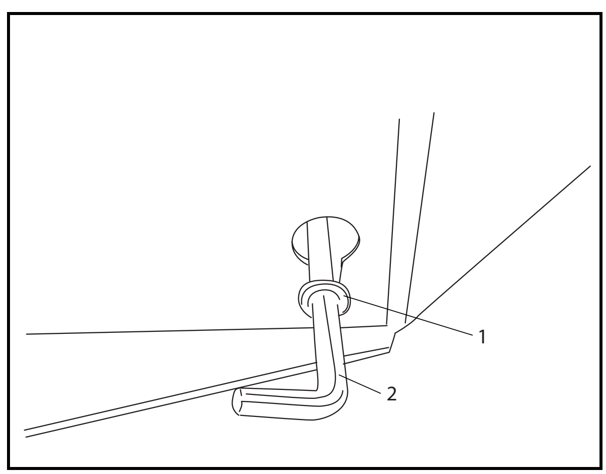


CZ10-2

1. IZT Bypass linkage

Bypass linkages

- Pull the IZT bypass linkages out and into the slots and release so that it is held in the bypass position.
- To reengage the IZT's to drive, reverse the above procedure.



CZ12

1. Head outside of rear deck

2. IZT Bypass linkage in bypass position

Bypass position

Maintenance

Maintenance Schedule

The following is a list of maintenance procedures that must be performed on the machine. For those points not described in this manual, visit an authorized service workshop. An annual service carried out by an authorized service workshop is recommended to maintain your machine in the best possible condition and to ensure safe operation.

Read “Maintenance” in the Safety Instructions section.

[1] First change after 5-8 hours. When operating with a heavy load or at high ambient temperatures, replace every 50 hours. [2] In dusty conditions, cleaning and replacement are required more often. [3] For daily use, the machine should be lubricated twice weekly. [4] Performed by authorized service workshop.

● = Described in this manual

❍ = Not described in this manual

Maintenance	Page	Daily maintenance		Weekly maintenance	At least once each year	Maintenance interval in hours			
		Before	After			25	50	100	300
Check the parking brake	53	●							
Check the engine’s oil level (every refueling)	57	●							
Check the safety system	39	●							
Check for fuel and oil leakages	-	❍							
Check/clean the engine’s cooling air intake	40		●						
Check the mower deck	49		●						
Check hardware (screws, nuts, etc.)	53		●						
Clean under the mower deck	53		●						
Start the engine and blades, listen for unusual sounds	-		❍						
Check for damage	-		❍						
Thoroughly clean around the engine	-		❍						
Clean around belts, belt pulleys, etc.	-		❍						
Check the tire pressures	45					●			
Check battery	37					●			
Sharpen/Replace mower blades	49					●			
Check the fuel pump’s air filter [2]	45					●			
Clean the engine’s cooling air intake [2]	40				●	●			
Clean the air cleaner’s pre-filter [2] (foam)	41				●	●			
Clean the air cleaner’s filter cartridge [2] (paper filter)	41				●		●		
Check/adjust the parking brake	-				❍		❍		
Inspect muffler/Spark arrester	-				❍		❍		

Maintenance	Page	Daily maintenance		Weekly maintenance	At least once each year	Maintenance interval in hours			
		Before	After			25	50	100	300
Check/adjust throttle and choke cables	40							●	
Check the condition of belts, belt pulleys, etc.	46				●			●	
Change the engine oil [1]	56				●		●		
Replace the engine oil filter	58				●			●	
Clean/replace the spark plugs	38				●			●	
Replace the fuel filter	44				●			●	
Replace the air filter (paper filter) [2]	43				●			●	
Check the caster wheels (every 200 hours)	53							●	
Clean the cooling fins [2]	-				❍			❍	
Replace the air cleaner's pre-filter [2] (foam)	41				●				●
Check/adjust the mower deck	51				●				●
Check the engine valve clearance[4]	-				❍				❍
Perform the 300-hour service [4]	79				❍				❍
Lubricate according to Lubrication Schedule	54				●	●	●	●	●
Check transaxle oil at reservior				●					
Change transaxle oil & filter (200 hours)					●				

[1] First change after 5-8 hours. When operating with a heavy load or at high ambient temperatures, replace every 50 hours. [2] In dusty conditions, cleaning and replacement are required more often. [3] For daily use, the machine should be lubricated twice weekly. [4] Performed by authorized service workshop.

● = Described in this manual

❍ = Not described in this manual



WARNING!

No adjustments or maintenance to be carried out unless:

- **The engine is stopped.**
- **The ignition key has been removed.**
- **The parking brake is on.**

Battery

Your mower is equipped with a maintenance free battery and does not need servicing. However, periodic charging of the battery with an automotive type battery charger will extend its life.

- Keep battery and terminals clean.
- Keep battery bolts tight.
- Recharge at 6-10 amperes for 1 hour

Always use protective glasses when handling the battery.

IMPORTANT INFORMATION

Do not attempt to open or remove caps or covers. Adding or checking level of electrolyte is not necessary.

Always use two wrenches for the terminal screws

To clean battery and terminals

Corrosion and dirt on the battery and terminals can cause the battery to “leak” power.

1. Open the terminal access doors.
2. Disconnect BLACK battery cable first, then the RED battery cable and remove the battery from the machine.
3. Rinse the battery with plain water and dry.
4. Clean terminals and battery cable ends with wire brush until shiny.
5. Coat terminals with grease or petroleum jelly
6. Reinstall battery.

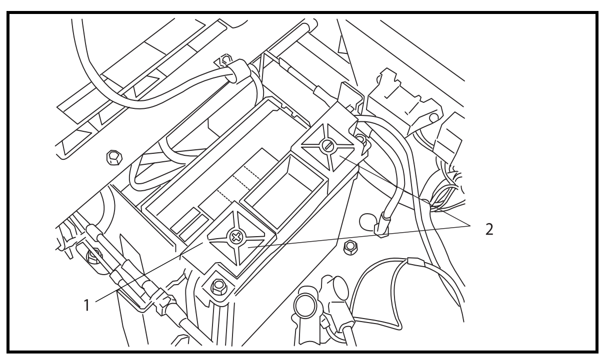
WARNING!

Do not short battery terminals by allowing a wrench or any other object to contact both terminals at the same time. Before connecting battery, remove metal bracelets, wristwatch bands, rings, etc.

Positive terminal must be connected first to prevent sparks from accidental grounding.

Replacing battery

1. Lift Seat and rotate forward.
2. Open terminal access doors.
3. Using two 1/2" wrenches disconnect BLACK battery cable then RED battery cable.
4. Using 7/16" wrench, remove terminal guard.
5. Carefully remove the battery from the mower.
6. Install new battery with terminals in the same position as the old battery.
7. Reinstall terminal guard.
8. First connect RED battery cable to positive (+) battery terminal with hex bolt and hex nut.



1. Terminal guard
2. Terminal access doors

Battery installation

9. Connect BLACK grounding cable to negative (-) battery terminal with remaining hex bolt and hex nut.
10. Tighten securely.
11. Close terminal access doors.
12. Lower seat.

Ignition System

The engine is equipped with an electronic ignition system. Only the spark plugs require maintenance.

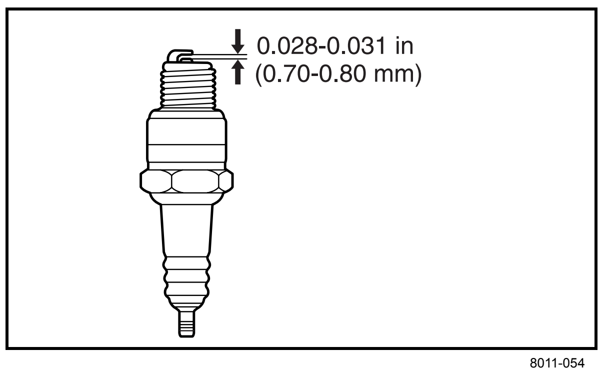
For recommended spark plugs, see Technical Data.

1. Remove the ignition cable boot and clean around the spark plug.
2. Remove the spark plug with a spark plug socket wrench.
3. Check the spark plug. Replace the spark plug if fouled, the electrodes are burned and if the insulation is cracked or damaged. Clean the spark plug with a steel brush if it is to be reused.
4. Measure the electrode gap with a gapping tool. The gap should be .030” (0.75 mm). Adjust as necessary by bending the side electrode.
5. Reinsert the spark plug, turning by hand to avoid damaging the threads.
6. After the spark plug is seated, tighten it using a spark plug wrench so that the washer is compressed. A used spark plug should be turned 1/8 of a turn from the seated position. A new spark plug should be turned 1/4 a turn from the seated position.
7. Replace the ignition cable.

IMPORTANT INFORMATION

Fitting the wrong spark plug type can damage the engine.

Inadequately tightened spark plugs can cause overheating and damage the engine. Tightening the spark plugs too hard can damage the threads in the cylinder head.



Measure the electrode gap

Checking the Safety System

The machine is equipped with a safety system that prevents starting or driving under the following conditions.

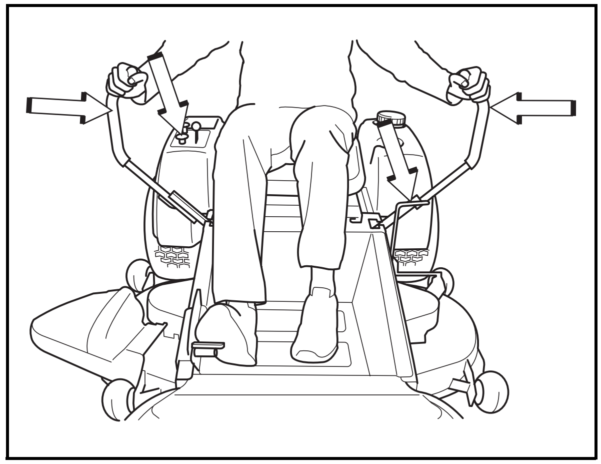
The engine can only be started when:

1. The mower deck is disengaged.
2. The steering controls are in the outer, locked neutral position.
3. The driver is sitting in the driver's seat.
4. The parking brake is on.

Make daily inspections to ensure that the safety system works by attempting to start the engine when one of the conditions is not met. Change the conditions and try again.
If the machine starts when one of these conditions is not met, turn the machine off and repair the safety system before using the machine again.

Make sure the engine stops when the park brake is not engaged and the operator leaves the seated position.

Check that the engine stops if the mower blades are engaged and the driver temporarily stands up.



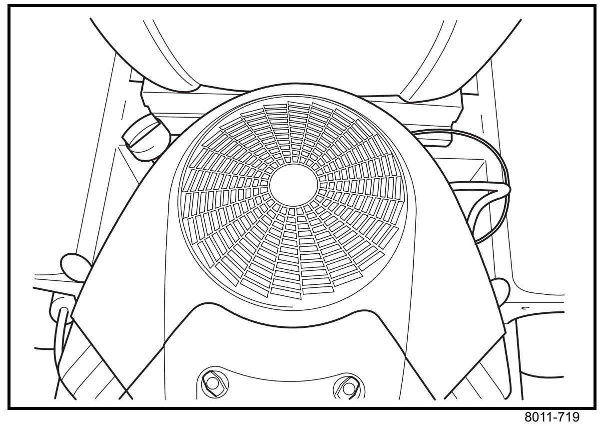
Conditions for starting

IMPORTANT INFORMATION

In order to be able to drive, the driver must sit in the seat and release the parking brake before the steering controls can be moved into the neutral position, otherwise the engine will stop.

Checking the Engine's Cooling Air Intake

Check that the engine's cooling air intake is free from leaves, grass, and dirt.
If the cooling air intake is clogged, engine cooling deteriorates, which can lead to engine damage.

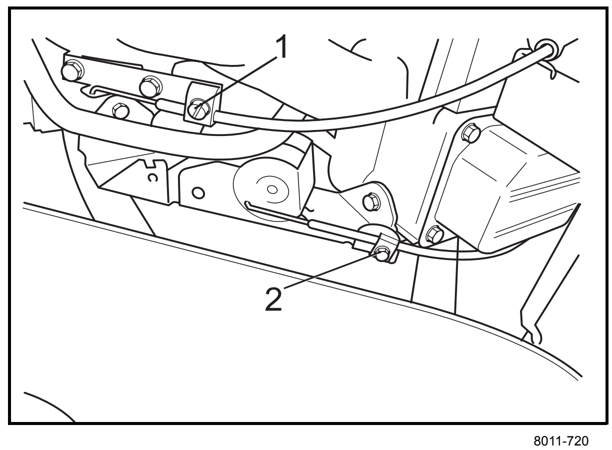


Check and clean the cooling air intake

Checking and Adjusting the Throttle Cable

Check that the engine responds to throttle increases and that a good engine speed is attained at full throttle.
If doubts arise, contact the service workshop.
If adjustments are necessary, they can be made as follows for the lower cable:

1. Loosen the clamping screw for the cable's outer casing and move the throttle to the full throttle position.
2. Check that the throttle cable is mounted in the correct hole in the lower lever, see illustration.
3. Push the throttle cable's outer casing as far to the right as possible and tighten the clamping screw.



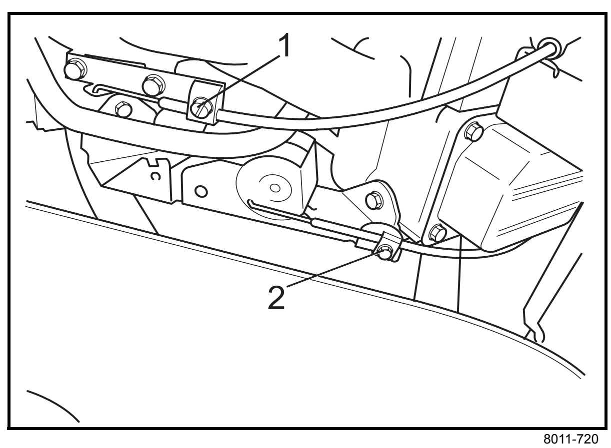
2. Throttle cable

Adjusting the throttle cable

Checking and Adjusting the Choke Cable

If the engine produces black smoke or is difficult to start, this can be because the choke cable is incorrectly adjusted (upper cable).
If doubts arise, contact the service workshop.
If adjustments are necessary, they can be made as follows:

1. Loosen the clamping screw for the cable's outer casing and push the choke control fully in.
2. Check that the choke cable is mounted in the upper lever, see illustration. Push the choke cable's outer casing as far to the left as possible and tighten the clamping screw.



1.Choke cable

Adjusting the choke cable

Replacing the Air Filter - Briggs & Stratton Engine

Standard air filter

If the engine seems weak or runs unevenly, the air filter may be clogged. If run with a dirty air filter, the spark plugs can become fouled disrupting operation.
For this reason, it is important to replace the air filter regularly (see the heading Maintenance Schedule for the proper service interval).

Cleaning/replacing the air filter is carried out as follows:

WARNING!

The engine and the exhaust system, become very hot during operation. Risk for burns if touched.

Allow engine and exhaust system to cool at least two (2) minutes.

1. Remove the air filter cowling
2. Remove the filter cartridge.
3. Remove the foam filter (pre-cleaner). Clean the foam filter with liquid detergent and water. Squeeze dry in a clean cloth. Saturate with engine oil and squeeze it inside a clean absorbenth cloth.
4. Tap the paper filter against a fixed surface to remove dust. If the paper filter is still dirty, it must be replaced.

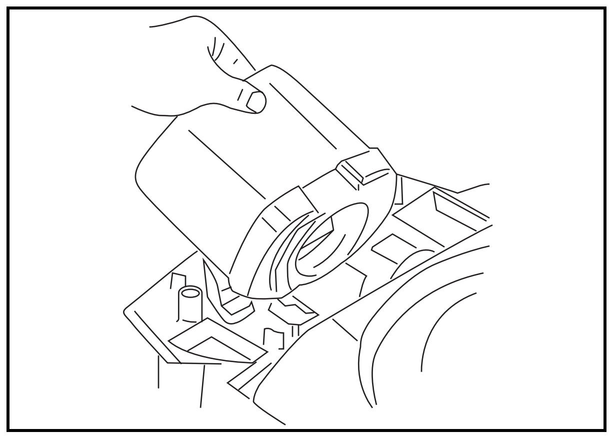
IMPORTANT INFORMATION

Do not used compressed air to clean the air filter.
Do not wash the paper filter.
Do not oil the paper filter.

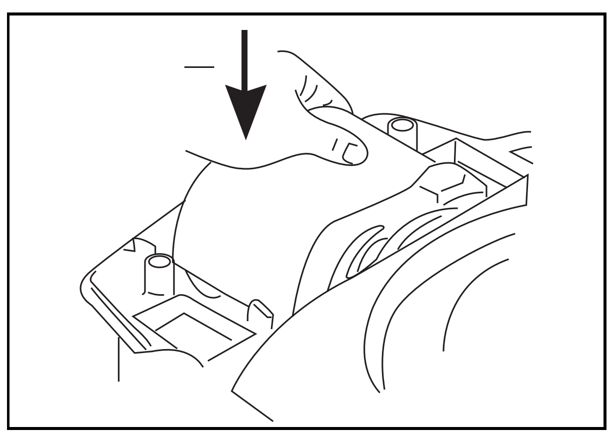
5. Wipe clean the inside of air filter housing.
6. Refit the foam filter (pre filter).
7. Mount the filter in the air filter housing.
8. Replace the cowling over the air filter housing.

IMPORTANT INFORMATION

Please see the manual of the engine manufacturer for any additional instructions, including safety instructions.


8019-014

Remove filter


8019-015

Install filter

Replacing the Air Filter Kawasaki Engine

Standard air filter

> **WARNING!**
>
> **The engine and the exhaust system, become very hot during operation. Risk for burns if touched.**
>
> **Allow engine and exhaust system to cool at least two (2) minutes.**

1. Remove the plastic fastener on the top of the air filter cowling and remove the air filter cowling.
2. Remove the foam rubber pre-filter and clean using a mild detergent.

   Squeeze it dry with a clean cloth.

3. Remove the wing nuts for the air filter and remove the paper filter. Tap the paper filter against a fixed surface to remove dust. If the paper filter is still dirty, it must be replaced.

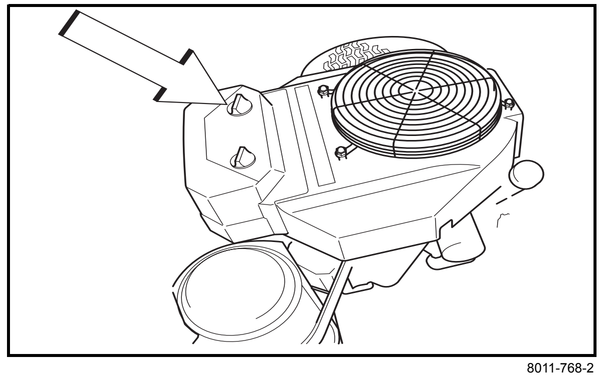
> **IMPORTANT INFORMATION**
>
> **Do not used compressed air to clean the air filter.**
> **Do not wash the paper filter.**
> **Do not oil the paper filter.**

4. Refit the air filter as follows:

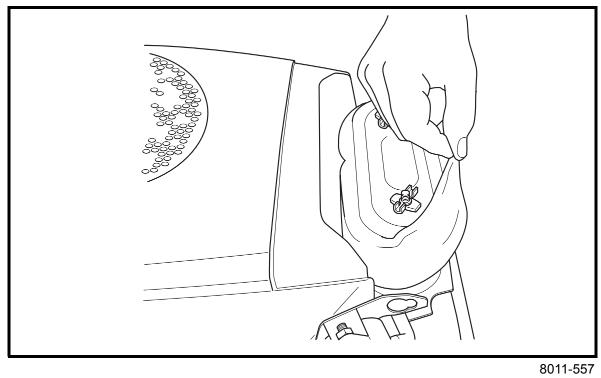
   Check that the seal on the bottom of the paper filter is whole.

   Mount the paper filter in the air filter housing and tighten the wing nuts.

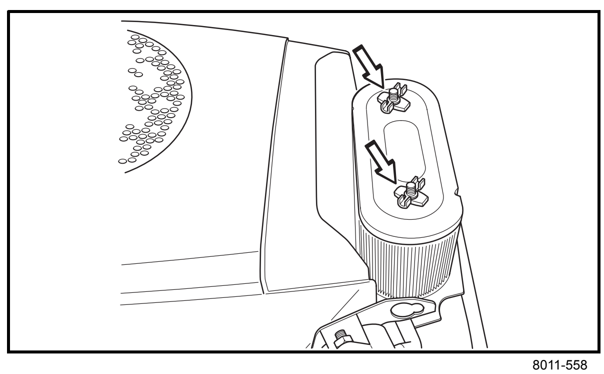
5. Refit the pre-filter on the paper filter.
6. Replace the cowling over the air filter housing. Do not over tighten the plastic fastener.



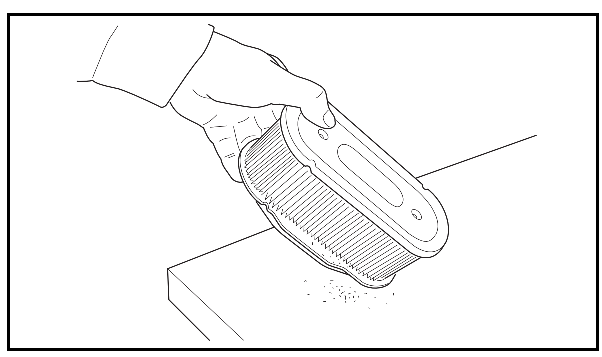
Remove the air filter cowling



Remove the pre-filter



Remove the paper filter



Remove dust

Replacing Air Filter Honda Engine

If the engine seems weak or runs unevenly, the air filter may be clogged. If run with a dirty air filter, the spark plugs can become fouled, distrupting operation.

For this reason, it is important to replace the air filter regularly (see the heading Maintenance Schedule for the proper service interval).

Cleaning/replacing the air filter is carried out as follows:

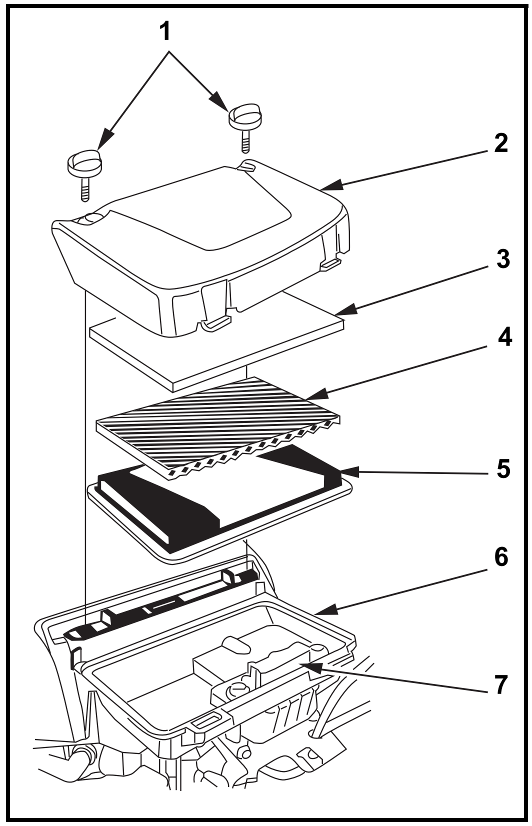
> **WARNING!**
>
> **The engine and the exhaust system, become very hot during operation. Risk for burns if touched.**
>
> **Allow engine and exhaust system to cool at least two (2) minutes.**

Inspection

Remove the air cleaner cover and inspect the filter elements. Clean or replace dirty filter elements. Always replace damaged filter elements.

1. Remove the two air cleaner covers bolts from the air cleaner cover and remove the cover.
2. Remove the foam filter element.
3. Remove the paper filter element from the grid.
4. Inspect both air filter elements and replace them if they are damaged. Always replace the paper filter element at the scheduled interval (200 hours).
5. Clean the air filter elements if they are to be reused.

Paper air filter element: Tap the filter element severval times on a hard surface to remove dirt, or blow compressed air (not exceeding 207 kPa, 30psi) through the filter element from the inside. Never try to brush off dirt; brushing will force dirt into the fibers.



8019-013

1. Air Cleaner Cover Bolts
2. Air Cleaner Cover
3. Foam Filter Element
4. Grid
5. Paper Filter Element
6. Air Cleaner Base
7. Air Duct

> **IMPORTANT INFORMATION**
>
> **Operating the engine without an air filter, or with a damaged air filter, will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by the Distributor's Limited Warranty.**

Replacing Heavy Duty Air Filter

If the engine seems weak or runs unevenly and the dust load indicator has turned red the air filter may be clogged. If run with a clogged air filter, disruption of operation can occur.

Cleaning/replacing the air filter is carried out as follows:

Only do so when the dust indicator is red.

WARNING!

The engine and the exhaust system, become very hot during operation. Risk for burns if touched.

Allow engine and exhaust system to cool at least two (2) minutes.

1. Unfasten the two metal clamps on the sides of the air filter cover. Remove the air filter cover.
2. Remove the paper filter. Lightly brush or use mild air pressure to clean.

IMPORTANT INFORMATION

Do not use compressed air to clean the air filter.

Do not wash the paper filter.

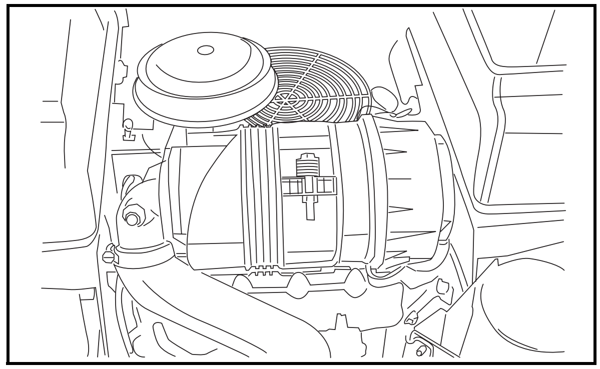
Do not oil the paper filter.

Do not tap filter to clean this could cause damage to the sealing.

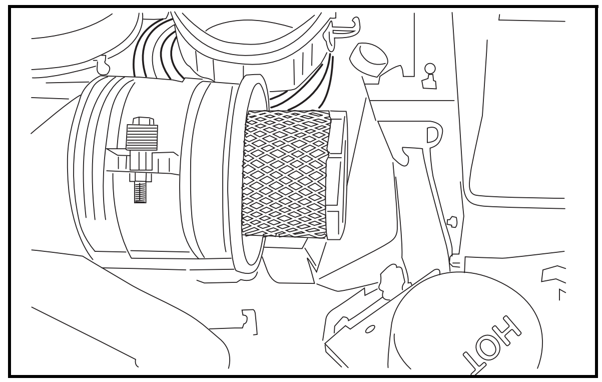
3. Only remove and replace safety element after the paper filter has been replaced 3 or 4 times.
4. Refit the air filter as follows:

   Check that the seal on the bottom of the paper filter is whole.

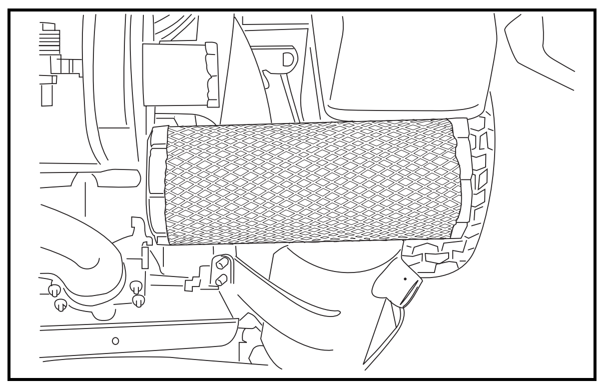
   Mount the safety element in the air filter housing.
5. Place the paper filter over the safety element.
6. Replace the cover over the air filter housing. Fasten the two metal clamps making sure the cover is snapped into position.
7. Push top of dust load indicator to reset it.



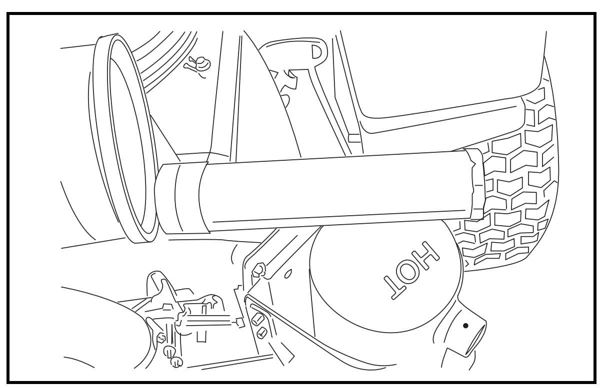
Heavy Duty Filter 8019-016



Cap Removal 8019-017



Outer element 8019-018



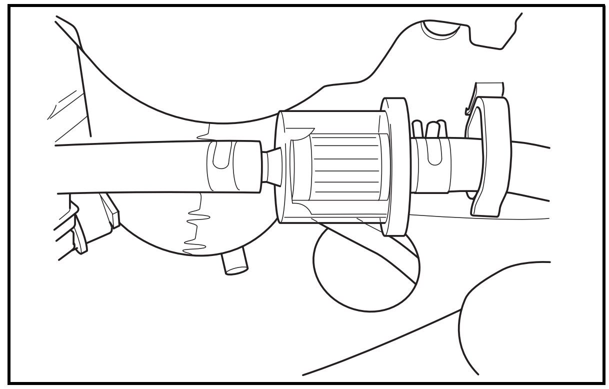
Inner element 8019-019

Replacing the Fuel Filter

Replace the line-mounted fuel filter every 100 hours (once per season) or more regularly if it is clogged.

Replace the filter as follows:

1. Move the hose clamps away from the filter. Use flat-nosed pliers.
2. Pull the filter loose from the hose ends.
3. Push the new filter into the hose ends. Position the filter with the ”FLOW” arrow pointing up toward the fuel pump. If necessary, a soap solution can be applied to the filter ends to ease mounting.
4. Move the hose clamps back toward the filter.



Fuel filter

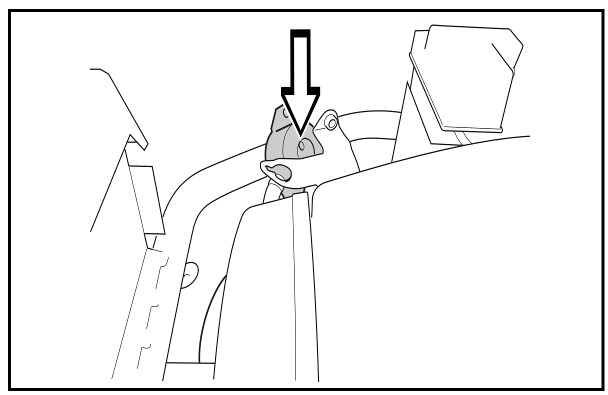
Checking the Fuel Pump’s Air Filter

Regularly check that the fuel pump’s air filter is free from dirt.

Remove the screws and open the pump, no hoses need be removed.

The filter can be cleaned with a brush if necessary.

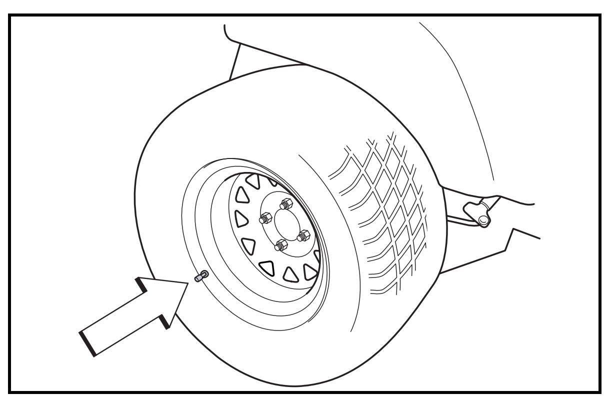
Replace the filter on the console.



The fuel pump’s air filter

Checking Tire Pressures

All four tires shall have a pressure of 15 psi / 103 kPa /1 bar.



Tire pressures

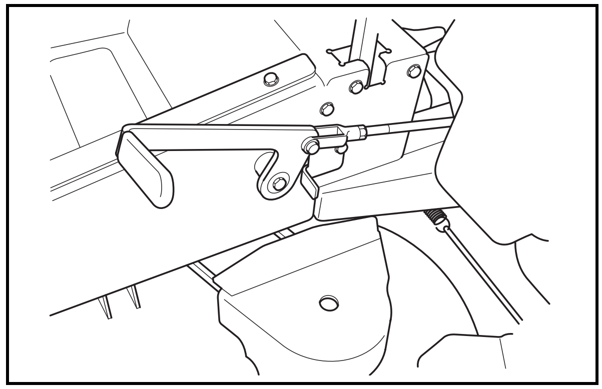
Checking the Parking Brake

Visually check that no damage is found on the lever, links, or switch belonging to the parking brake. Perform a stand-still test and check that there is sufficent braking action.

To adjust the parking brake, contact the Husqvarna service workshop.

WARNING!

Faulty adjustment can cause an accident.


8011-711

The parking brake in the disengaged position

IMPORTANT INFORMATION

The machine must be absolutely standing still when applying the parking brake.

Checking the V-belts

Check every 100 hours of operation. Check for severe cracking and large nicks.

NOTE: The belt will show some small cracks in normal operation.

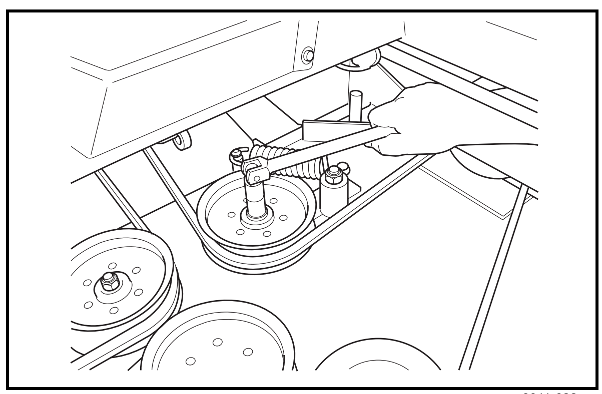
The belts are not adjusable. Replace belts if they begin to slip from wear.

Deck belt

To replace deck belt

Deck belt removal.

- Park on a level surface. Apply park brake.
- Lower the deck into the lowest cutting position.
- Using a ratchet with a 9/16” socket on the spring idler bolt to relieve the tension on the belt.
- Remove screws from both the left and right belt shields, and remove shields.
- Remove any dirt or grass that may have accumulated around the cutter housings and entire deck surface.
- Carefully roll the belt over the top of the cutter housing pulleys.
- Remove the belt from around the electric clutch on the engine shaft.
- The belt can now be removed.

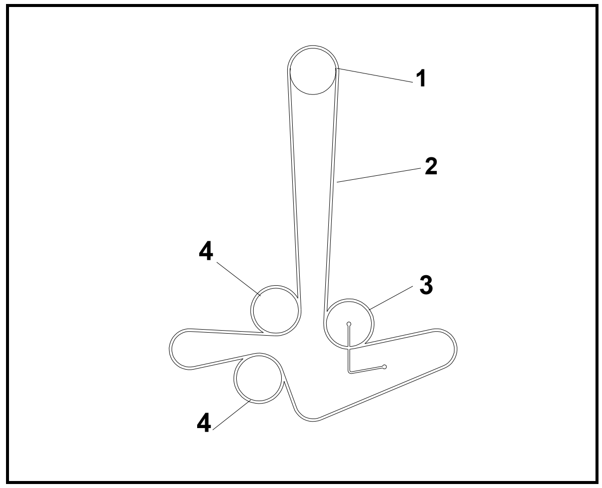

8011-622

Slackening the belt tensioner

Deck belt installation

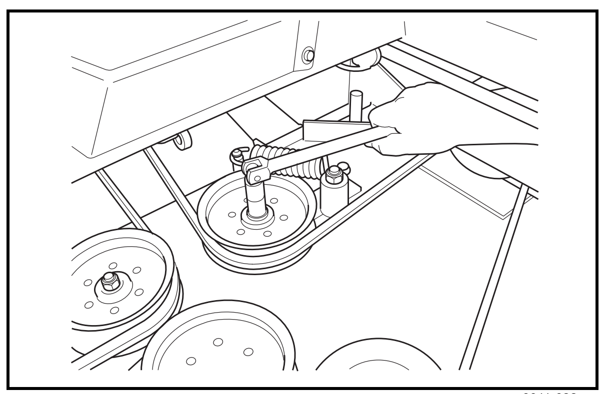
NOTE: For ease in installing the deck belt, refer to the routing decal on the front edge of the deck.

- Wrap the deck belt around the electric clutch that is located on the engine shaft.
- Push the rest of the belt through the IZT(Integraded Zeroturn Transaxle) support and up onto the deck.
- Starting on the right hand side of the deck, wrap the belt around the large right side idler, right cutter housing pulley, small center idler, center pulley, left side pulley and then around the large left side idler.
- The belt will be loose at this point.
- Using a ratchet with a 9/16” socket on the spring idler bolt to relieve the tension on the belt. See decal on the top of deck for belt routing information.
- After installation is complete check the belt for twists.



1. Clutch pulley
2. Deck belt
3. Spring idler pulley
4. Fixed idler pulley

Belt routing, deck belt



Slackening the belt tensioner

IZT belt

To replace IZT (Integraded Zeroturn Transaxle) belt

Park the mower on a level surface. Engage the park brake.

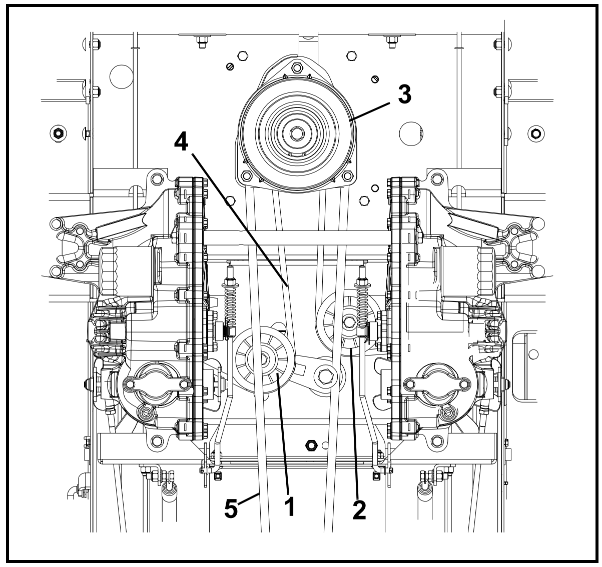
IZT belt removal

NOTE: Be careful not to damage the fan blades on the IZT as this can affect cooling or damage the IZT

- Remove the deck belt (see to replace deck belt in this section of the manual).
- Create slack in the belt by either removing the spring on the pump idler arm or inserting 1/2” breaker bar into the square hole on the spring loaded idler. Rotate arm to release belt tension.
- The belt should now be able to be removed from the engine pulley and IZT pulleys.

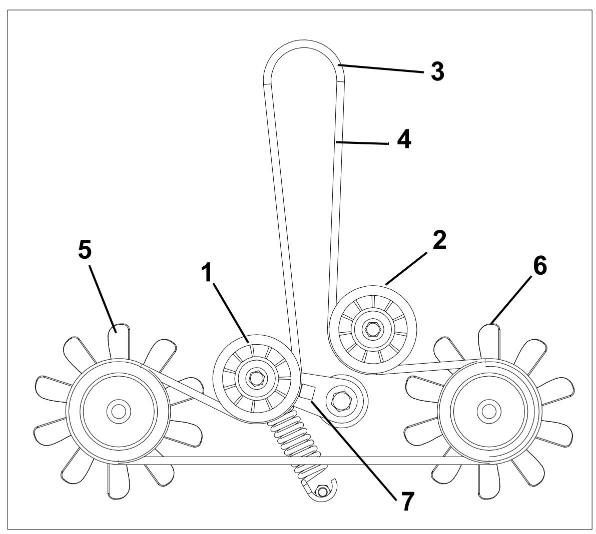
Belt installation

- Wrap the IZT belt around the IZT pulleys.
- Route the belt around the inside of the idler pulley.
- Now you can wrap the belt around the engine pulley.
- Reattach the spring on the pump idler arm if previously disconnected.
- Reinstall the deck belt onto the electric clutch pulley (see to replace deck belt in this section of the manual).



1. Spring loaded idler pulley
2. Fixed idler pulley
3. Electric clutch
4. IZT belt
5. Deck belt

IZT belt



1. Spring loaded idler pulley
2. Fixed idler pulley
3. Engine
4. IZT belt
5. Left drive pulley
6. Right drive pulley
7. Square hole

IZT belt routing

Checking the Blades

In order to attain the best mowing effect, it is important that the blades are well sharpened and not damaged.



WARNING!

Blades are sharp. Protect your hands with gloves and/or wrap blades with a heavy cloth when handling.

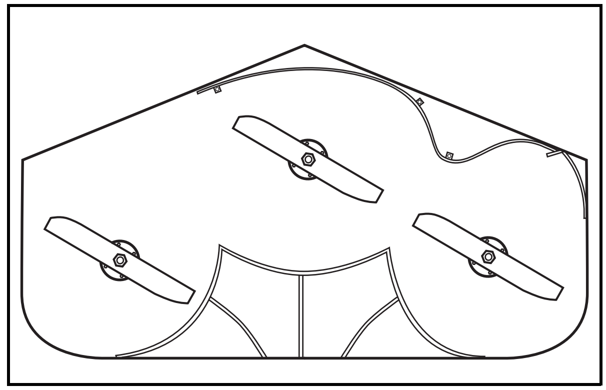
Bent or cracked blades or blades with large nicks should be replaced.

Check the blade mounts.

IMPORTANT INFORMATION

The sharpening of blades should be carried out by an authorized service workshop.

Damaged blades should be replaced when hitting obstacles that result in a breakdown. Let the service workshop decide whether the blade can be repaired/ground or must be replaced.



8011-604

Check the blades

Blade replacement:



WARNING!

Blades are sharp. Protect your hands with gloves and/or wrap blades with a heavy cloth when handling.

- Remove blade bolt by turning counterclockwise.

IMPORTANT INFORMATION

To ensure proper assembly, center hole in blade must align with star on cutter housing.

- Install new or re-sharpened blade with stamped "GRASS SIDE" facing towards ground/grass (down) or "THIS SIDE UP" facing deck and cutter housing.
- Install and tighten blade bolt securely.

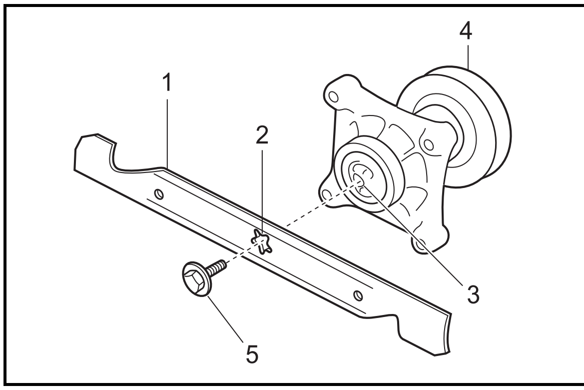
  Torque blade bolt to 45-55 ft/lbs (60-75 Nm).

IMPORTANT INFORMATION

Special blade bolt is heat treated.

Replace with a Husqvarna bolt if required.

Do not use lower grade hardware than specified.



1. Blade
2. Center hole
3. Star
4. Cutter housing
5. Blade bolt (special)

Blade attachment, principal

Adjusting the Mower Deck



WARNING!

Before performing any service or adjustment checklist:
1. Engage the parking brake.
2. Place the Blade switch in the disengaged position.
3. Turn ignition switch to "OFF" position and remove the key.
4. Make sure the blades and all moving parts have completely stopped.
5. Disconnect the spark plug wire from all spark plugs and place the wire where it cannot come in contact with the plug.

Check the tire pressure before adjustment of the mover deck, refer to page 45.

Faulty mower deck adjustment will cause uneven mowing result.

Leveling

1. Position the mower on a level, preferably concrete, surface.
2. Check the pressure in all four tires. See "Technical Data" on page 66.
3. Raise the mower on lengths of 2" x 4" placed edgewise under the cutting deck from front to rear (see diagram).
4. Lower the deck onto the 2" x 4"´s. The rear of the deck is approxemately 1/4" deeper than the front. This gives the deck a proper pitch front to back when lowered onto the 2" x 4" guides.
5. Set cutting height to 4".
6. Adjust the four lower chain bolts so that they are centered in the oblong slots.
7. Move the lifting lever and check that all the chains are equally tensioned. If they are not, adjust the appropriate lower chain bolt in its slot.

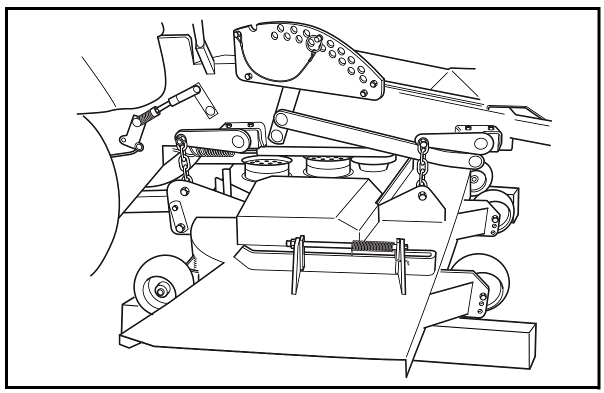
Adjusting Cutting Height

1. Raise and secure the deck height lever to the transport position (4 1/2").
2. Position blade tip so it is straight forward.
3. Measure from the cutting edge of the blades to a flat level surface. The distance should be 4 1/2" (114 mm).
4. Drop and secure the lever at (for example) the 2" cutting height. Measure as above. The distance should be 2" (50 mm).



WARNING!

Blades are sharp. Protect your hands with gloves and/or wrap blades with a heavy cloth when handling.



8011-601

Leveling the mower deck

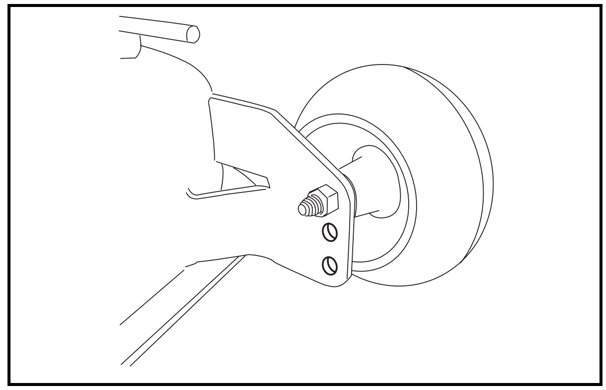
To adjust anti-scalp rollers

Anti-scalp rollers are properly adjusted when they are just slightly off of the ground when the deck is at the desired cutting height in the operating position. Anti-scalp rollers then keep the deck in the proper position to help prevent scalping in most terrain conditions.

> **IMPORTANT INFORMATION**
> **Adjust Anti-scalp rollers with the mower on a flat level surface.**

1. Adjust the deck to the desired cutting height (see “TO ADJUST DECK CUTTING HEIGHT” in the operation section of this manual).
2. Using a 3/4" wrench and a 9/16" wrench, remove the nut and shoulder bolt from the anti-scalp roller.
3. Lower the anti-scalp roller to the ground, and raise it up to the next highest hole.
4. Replace and tighten the nut and shoulder bolt.
5. Be sure to adjust all of the anti-scalp rollers to the same position.
6. Be sure to readjust the anti-scalp rollers if the cutting height is changed.

> **IMPORTANT INFORMATION**
> **The anti-scalp rollers must not be used for gauge wheels or the roller and deck may be damaged.**

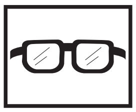


Anti-scalp roller

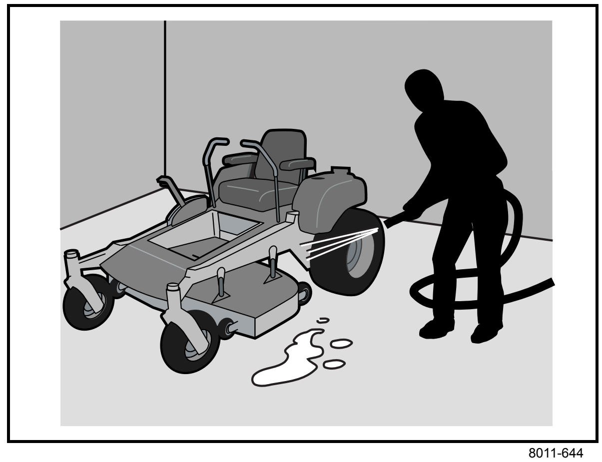
Cleaning and Washing

Regular cleaning and washing, especially under the mower deck, will increase the machine's lifespan. Make it a habit to clean the machine directly after use (after it is cooled), before the dirt sticks.

Do not spray water on the top of the mower deck. Use compressed air to clean the top side of mower deck. Regularly clean deck and underside of the deck, avoid spraying engine and electrical components with water



Use protective glasses when cleaning and washing.



Cleaning

Caster Wheels

Check every 200 hours. Check that wheels rotates freely. If wheels do not rotate freely take the unit to your dealer for service.

IMPORTANT INFORMATION

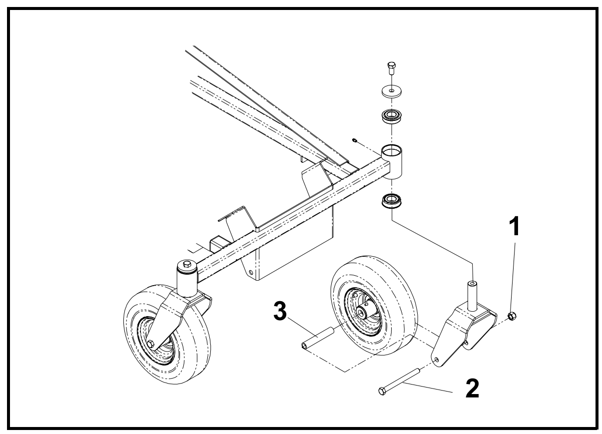
DO NOT add any type of tire liner or foam fill material to the tires. Excessive loads created by foam filled tires will cause premature failures.

Only use O.E.M. specified tires.

Foam filled tires or solid tires will void the warranty.

Removal and installation of caster wheel

1. Remove nut and caster bolt.
2. Pull the wheel out of the fork and take care of the sleeve.
3. Install in reverse order. Tighten caster bolt.



1. Nut
2. Bolt
3. Sleeve

Caster wheels

Hardware

Check daily. Inspect the entire machine for loose or missing hardware.

Parking brake

To adjust parking brake

Jack up unit and support properly with jack stands. Allow clearance to work at rear transaxles. Before making any adjustments:

Set park brake.

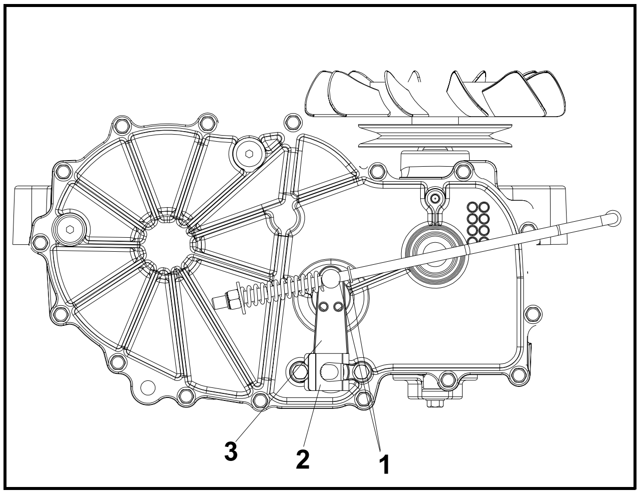
Measure the distance between the rod swivel pin and the brake arm washer. With the brake engaged, there should be a gap of 1/8” to 1/2” (3 mm to 13 mm) between the swivel pin and the brake arm washer.

If measurement is out of range adjust as follows:

Disengage park brake lever. Remove retaining clip and remove brake arm by pulling horizontally from the IZT splined shaft.

Rotate brake arm on spline “rearward” to increase brake tension. Rotate the brake arm one spline “forward” to decrease brake arm tension.

Reinstall the retaining clip and recheck gap between rod swivel pin and brake rod washer. Repeat the procedure on the other IZT.



1. Gap 1/8” to 1/2” between swivel and washer
2. Retaining clip
3. Brake arm

Park brake

Tracking adjustment

If the mower is not tracking straight, check the air pressure in both rear tires. Recommended air pressure is 15 psi (1 bar). If the unit will not track straight, follow the steps below. Tracking must be checked on a flat and level concrete or blacktop surface.

Mower is tracking to the right.

Increase the air pressure 2-3 psi (0.1-0.2 bar) in the right rear tire or decrease the air pressure 2/3 psi in the left rear tire.

Mower is tracking to the left.

Increase the air pressure 2-3 psi (0.1-0.2 bar) in the left rear tire or decrease the air pressure 2/3 psi in the right rear tire.

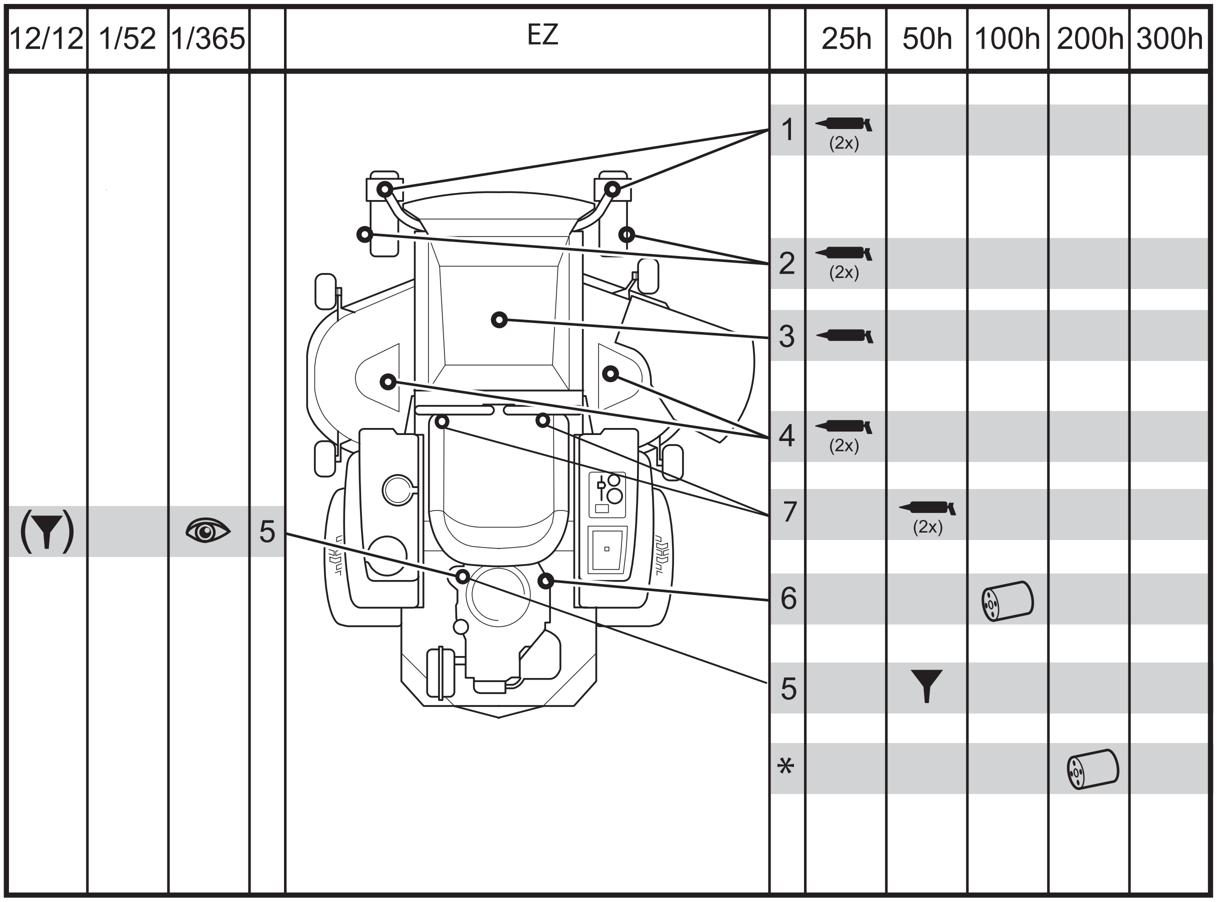
Recheck tracking and keep making adjustments with the tire pressure until the unit tracks straight.

DO NOT exceed maximum recommended tire pressure 24 psi (1.6 bar).

Record the tire pressure for future reference.

Lubrication

Lubrication Schedule



8011-672-2

Lubrication schedule

12/12 Every year

1/52 Every Week

1/365 Every day

Lubricate with grease gun

Oil change

Filter change

Lubricate with oil can

Level check

*** Change transaxles (transmission) filters.**

General

Remove the ignition key to prevent unintentional movements during lubrication.

When lubricating with an oil can, it must be filled with engine oil.

When lubricating with grease, unless otherwise stated, use a high grade molybdenum disulfide grease.

For daily use, the machine should be lubricated twice weekly.

Wipe away excess grease after lubrication.

It is important to avoid getting lubricant on the belts or the drive surfaces on the belt pulleys. Should this happen, attempt to clean them with spirits. If the belt continues to slip after cleaning, it must be replaced. Gasoline or other petroleum products must not be used to clean belts.

Lubricating the Cables

If possible, grease both ends of the cables and move the controls to end stop positions when lubricating. Refit the rubber covers on the cables after lubrication. Cables with sheaths will bind if they are not lubricated regularly. If a cable binds, it can disrupt operation.

If a cable binds, remove the cable and hang it vertically. Lubricate it with light engine oil until the oil begins to escape from the bottom.

Tip: Fill a small plastic bag with oil and tape it so that it seals against the sheath and allow the cable to hang vertically from the bag overnight. If you do not succeed in lubricating the cable, it must be replaced.

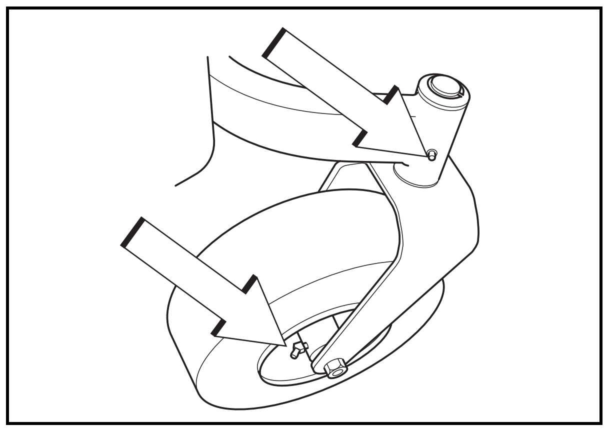
Lubricating in Accordance with the Lubrication Schedule

1. Front Wheel Mount

Lubricate with a grease gun, one zerk for each wheel mount, until the grease is forced out.

Use only good quality bearing grease.

Grease from well-known brand names (petrochemical companies, etc.) usually maintains a good quality.



8011-731

Lubricating the front wheels

2. Front Wheel Bearings

Lubricate with a grease gun, one zerk for each set of wheel bearings, until the grease is forced out.

Use only good quality bearing grease.

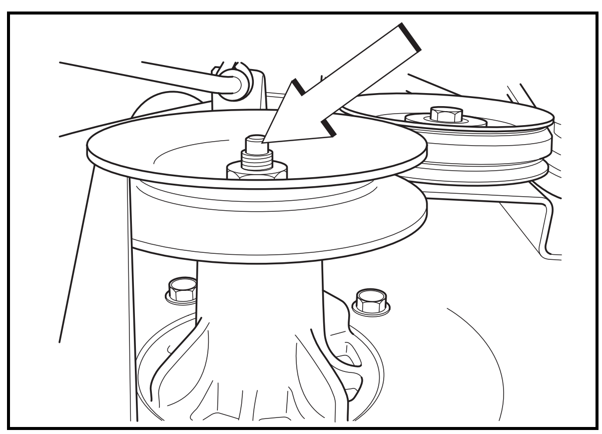
3. Deck spindle

Lower the cutting deck completely.

If you use grease gun without rubber hose, the foot plate must be removed.

Lubricate with a grease gun, one zerk, 2-3 strokes.

Use only good quality bearing grease.



8011-732

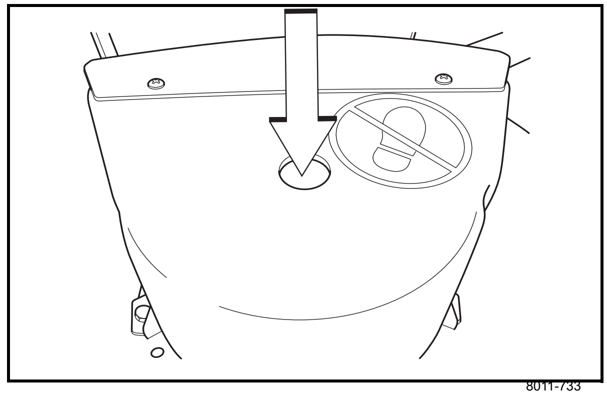
Deck spindle

> **IMPORTANT INFORMATION**
> **Use minimal lubrication and remove excess lubricant so that is does not come into contact with belts or belt pulley drive surfaces.**

4. Deck outer spindle

Lubricate using a grease gun, one zerk, each side 2-3 strokes.

Use only good quality bearing grease.



Deck outer spindle

5. Engine Oil

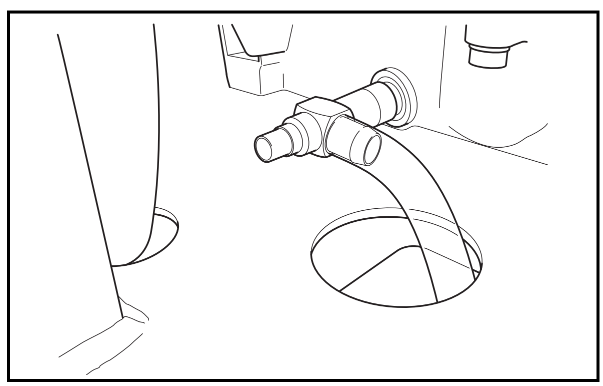
Changing the Engine Oil

The engine oil should be changed for the first time after 5-8 hours of operation. Thereafter, it should be changed every 50 hours.

WARNING!
Engine oil can be very hot if it is drained directly after stopping the engine. Allow the engine to cool somewhat first.

IMPORTANT INFORMATION
Used engine oil is a health hazard and must not be disposed of on the ground or in nature; it should always be disposed of at a workshop or appropriate disposal location.
Avoid skin contact; wash with soap and water in case of spills.

1. Place the machine on a flat surface.
2. Place a container under the engine where the hose from the oil drain valve exits.
3. Remove the dipstick and open the drain valve.
4. Allow the oil to run out into the container.
5. Then close the oil drain valve.
6. Replace the oil filter if necessary.
7. Fill with new engine oil in accordance with Checking the Oil Level.
8. Start the engine. Run it for a few seconds. Stop and re-check the oil level.



Oil drain valve

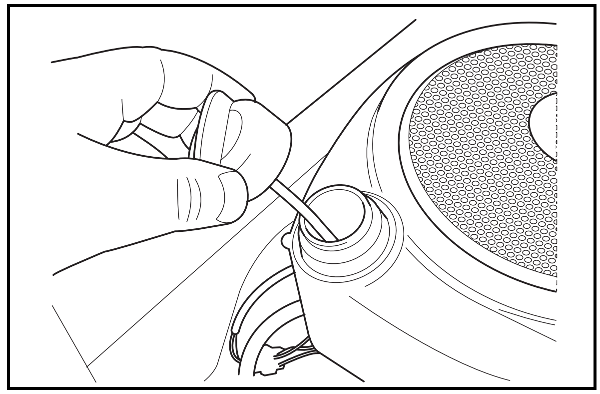
Checking the Oil Level

Check the oil level in the engine when the machine is standing level and the engine is stopped.

Remove the dipstick, wipe it clean, and then replace it.

The dipstick should be screwed into place.

Take the dipstick out again and read the oil level.

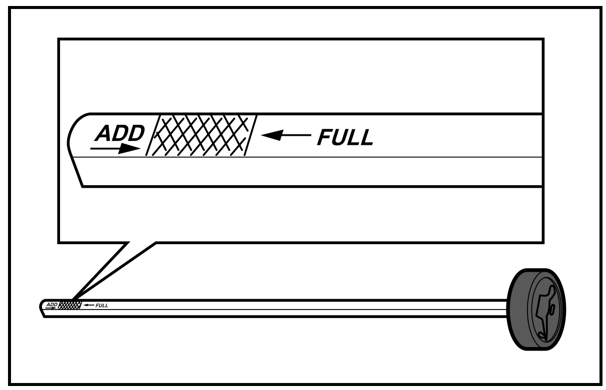


Remove the dipstick

The oil level should lie between the markings on the dipstick. If the level is approaching the ”ADD” mark, fill the oil to the ”FULL” mark on the dipstick.

Never fill to above the ”FULL” mark.

The oil is filled through the hole for the dipstick.



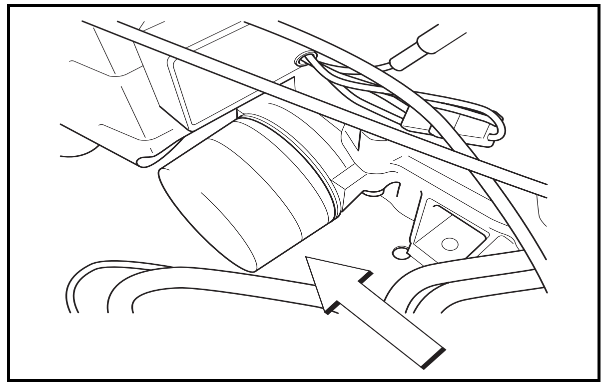
The dipstick markings

API class SF, SG, SH, SJ or higher must be used. Syntetic oil SAE 5W-30 or 10W-30 is recommended at all temperatures. Mineral oil SAE 5W-30, 10W-30 can be used between -18 °C/0 °F and +5 °C/40 °F. At temperature above +5 °C/40 °F single grade SAE 30 must be used.

The engine holds 0.88 qt (1.0 liters) of oil excluding the filter, including filter 2 qt (1.9 liters).

6. Changing the Engine Oil Filter

1. Drain the engine oil in accordance with the work description under the heading Engine Oil/Change Engine Oil.
2. Remove the oil filter. If necessary, use a filter remover.
3. Wipe new, clean engine oil onto the seal for the new filter.
4. Mount the filter by hand with + 3/4 turn.
5. Run the engine warm, then check that there are no leaks around the oil filter seal.
6. Check the oil level in the engine, fill if necessary. The oil filter holds 0.1 qt (0.1 liters) of oil.



8011-734

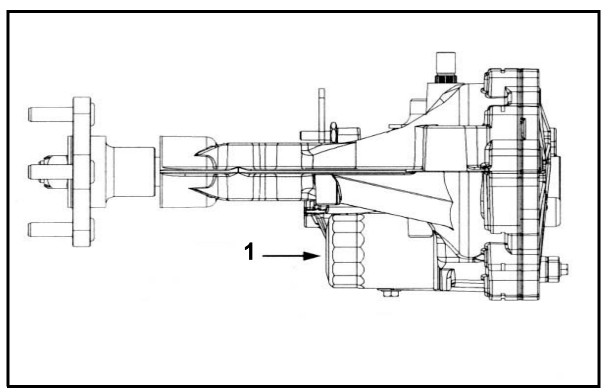
Changing the oil filter

*Transaxle (Transmission) Fluid Change

This transaxle is designed with an external filter for ease of maintenance. To ensure constant fluid quality levels and longer life an oil filter change interval of every 200 hours is recommended.

The following procedure can be performed with the transaxles installed in the vehicle, and the vehicle on level ground. Apply the bypass valve for each transaxle and lock the vehicle parking brake.

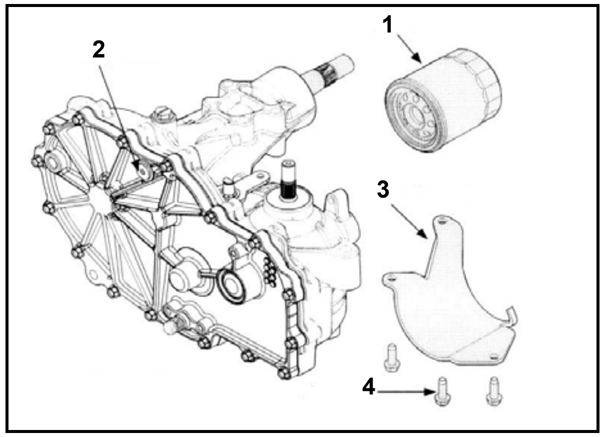
1. Remove the three 1/4” filter guard screws and filter guard. Clean any loose debris from around the perimeter of the filter. See illustrations.
2. Place an oil drain pan (12” or more diameter and 8 qt. capacity is optimal) beneath the oil filter. Remove the oil filter from the transaxle.
3. After the oil has drained, wipe the filter base surface off and apply a film of new oil to the gasket of the new replacement filter.
4. Install the new filter by hand, turn 3/4 to one full turn after the filter gasket contacts the filter base surface.
5. Re-install the filter guard with the three 1/4” screws. Torque screws to 65 in/lbs. each.
6. Repeat steps on the opposite side of transaxle drive.



1. Filter (guard removed) 8019-011

Changing the oil filter

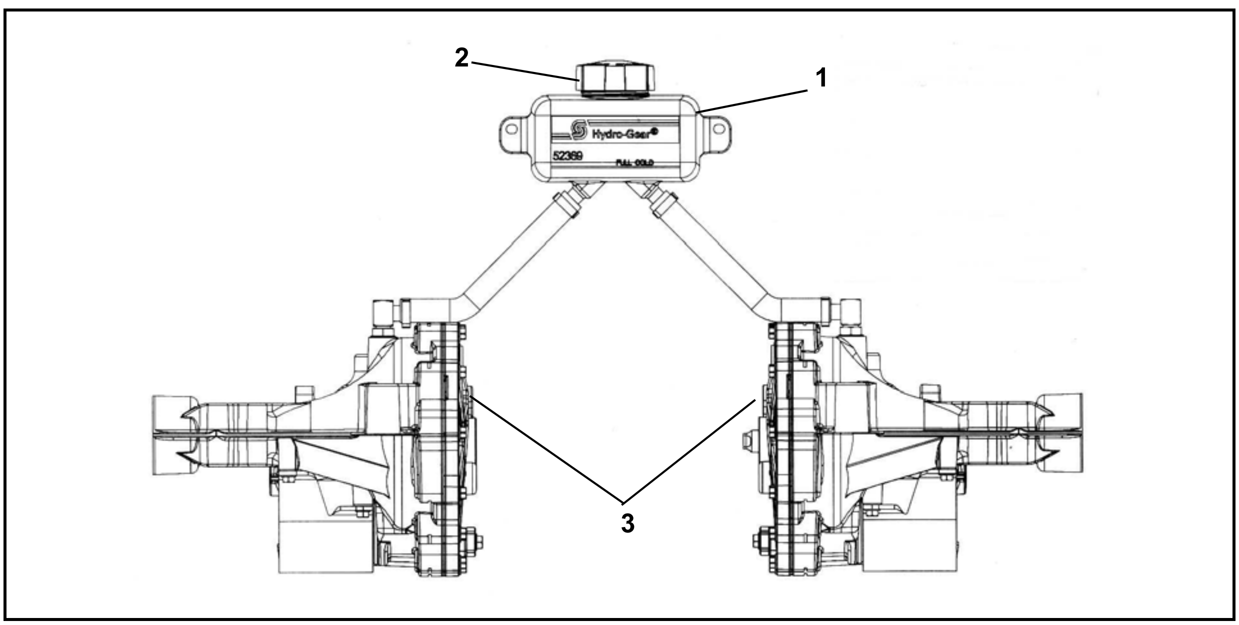
7. Drain old oil filters of all free flowing oil prior to disposal. Place used oil in appropriate containers and dispose of it in accordance with laws in your area.
8. Remove the top port plug (see illustration) from the left side and right side of the transaxles prior to filling with oil. This will allow the transaxles to vent during oil fill.
9. Remove the cap from the transaxles' expansion tank located on the vehicle frame.
10. Fill with 20W50 motor oil until oil just appears at the bottom of each transaxles' top port (approximately 2 quarts per transaxle, 4 quarts total). Install the top port lug into each transaxle as the oil level reaches this port.
11. Install and torque the top port plugs to 180 in./lbs.
12. Continue to fill the transaxles through the expansion tank until the "Full Cold" line is reached (this will take approximately 23 additional ounces).
13. Re-install the expansion tank cap by hand. Be careful to not overtighten.
14. Proceed to the purge procedure.



1. Filter
2. Top Port Plug
3. Filter Guard
4. Screws

8019-010

Changing the oil filter



1. Expansion Tank
2. Cap
3. Transaxles

8019-012

Expansion Tank

Purging Procedures

Due to the effects air has on efficiency in hydrostatic drive applications, it is critical that it is purged from the system.

These purge procedures should be implemented any time a hydrostatic system has been opened to facilitate maintenance or any additional oil has been added to the system.

The resulting symptoms in hydrostatic systems may be:

1. Noisy operation.
2. Lack of power or drive after short term operation.
3. High operation temperature and excessive expansion of oil.

Before starting, make sure the transaxle is at the proper oil level. If it is not, fill to the specifications outlined earlier.

The following procedures are best performed with the vehicle drive wheels off the ground. Then repeated under normal operating conditions.

1. Disengage the brake if activated.
2. With the bypass valve open and the engine running at fast idle, slowly move the directional control in both forward and reverse directions (5 or 6 times). As air is purged from the unit, the oil level will drop.
3. With the bypass valve closed and the engine running, slowly move the directional control in both forward and reverse directions (5 to 6 times). Check the oil level, and add oil as required after stopping the engine.
4. It may be necessary to repeat Steps 2 and 3 until all the air is completely purged from the system. When the transaxle operates at normal noise levels and moves smoothly forward and reverse at tnormal speeds, then the transaxle is considered purged.
5. After the vehicle has been used two times, the oil level should be checked while the oil is cold and adjusted accordingly.

Trouble Shooting Guide

Problem	Cause
The engine will not start.	• The blade switch is engaged. • The steering controls are not locked in the neutral position. • The driver is not sitting in the driver's seat. • The parking brake is not activated. • The battery is dead. • Contamination in the carburetor or fuel line. • The fuel supply is closed or the shut-off valve for the fuel tank is in the wrong position. • Clogged fuel filter or fuel line.
The starter does not turn the engine over.	• Dead battery. • Poor contacts on the battery terminal cable connections. • Fuse blown. • Ignition system faulty. • Fault in the starter safety circuit. See Checking the Safety System in the "Maintenance Section,"
The engine runs rough.	• Faulty carburetor. • The choke control is pulled out with a warm engine. • Defective valves. • Defective piston, cylinder, piston ring, or cylinder head seal. • The cylinder head bolts are loose. • Clogged fuel filter or jet. • Clogged ventilation valve on the fuel cap. • Fuel tank nearly empty. • Defective spark plugs. • The spark plugs are loose. • Defective ignition cable. • Defective spark plug electrode. • Defective spark plug connection. • Rich fuel mixture or fuel-air mixture.

	• Wrong fuel type. • Water in the fuel. • Clogged air filter. • Air trapped in hydraulic system.
The engine seems weak.	• Clogged air filter. • Defective spark plugs. • Carburetor incorrectly adjusted. • Air trapped in hydraulic system.
The engine overheats.	• Clogged air intake or cooling fins. • Engine overloaded. • Poor ventilation around engine. • Defective engine speed regulator. • Soot in the combustion chamber. • Too little or no oil in the engine. • Defective spark plugs. • Pre-ignition incorrect. • Air trapped in hydraulic system.
Battery not charging.	• Poor contact with battery terminal cable connectors.
The machine moves slowly, unevenly, or not at all.	• Parking brake on. • Bypass valve on pump open. • Drive belt for the transmission gears slack or has come off. • Air trapped in hydraulic system.
Mower deck not engaging.	• Drive belt for the mower deck has come loose. • Contact for the electromagnetic coupling has loosened. • The blade switch is faulty or has come loose, from the cable contact. • The fuse has blown.
Transaxle leaks oil.	• Damaged seals, housing, or gaskets. • Air trapped in hydraulic system.

TROUBLE SHOOTING GUIDE

Uneven mowing results.	• Different air pressure in the tires on the left and right sides. • Bent blades. • The suspending for the mower deck is uneven. • The chain fixture has come loose. • The blades are blunt. • Driving speed too high. • The grass is too long. • Grass collected under the mower deck.
The machine vibrates.	• The blades are loose. • The blades are incorrectly balanced. • The engine is loose.

Storage

Winter Storage

At the end of the mowing season, the machine should be readied for storage (or if it will not be in use for longer than 30 days). Fuel allowed to stand for long periods of time (30 days or more) can leave sticky residues that can plug the carburetor and disrupt engine function.

Fuel stabilizers are an acceptable option as regards to the sticky residues that can occur during storage.

Add stabilizer to the fuel in the tank or in the storage container. Always use the mixing ratios specified by the manufacturer of the stabilizer. Run the engine for at least 10 minutes after adding the stabilizer so that it reaches the carburetor. Do not empty the fuel tank and the carburetor if you have added stabilizer.

WARNING!

Never store an engine with fuel in the tank indoors or in poorly ventilated spaces where fuel vapor can come in contact with open flames, sparks, or a pilot light such as in a boiler, hot water tank, clothes drier, etc. Handle the fuel with care. It is very flammable and careless use can cause serious personal injury and property damage. Drain the fuel into an approved container outdoors and far away from open flame. Never use gasoline for cleaning. Use a degreaser and warm water instead.

To ready the machine for storage, follow these steps:

1. Thoroughly clean the machine, especially under the mower deck. Touch up damage to the paint and spray a thin layer of oil on the underside of the mower deck to avoid corrosion.
2. Inspect the machine for worn or damaged parts and tighten any nuts or screws that may have become loose.
3. Change the engine oil; dispose of properly.
4. Empty the fuel tanks or add a fuel stabilizer. Start the engine and allow it to run until the carburetor is drained of fuel or the stabilizer has reached the carburetor.
5. Remove the spark plug and pour about a tablespoon of engine oil into the cylinder. Turn over the engine so that the oil is evenly distributed and then refit the spark plug.
6. Lubricate all grease zerks, joints, and axles.
7. Remove the battery. Clean, charge, and store the battery in a cool place, but protect it from direct cold.
8. Store the machine in a clean, dry place and cover it for extra protection.

Service

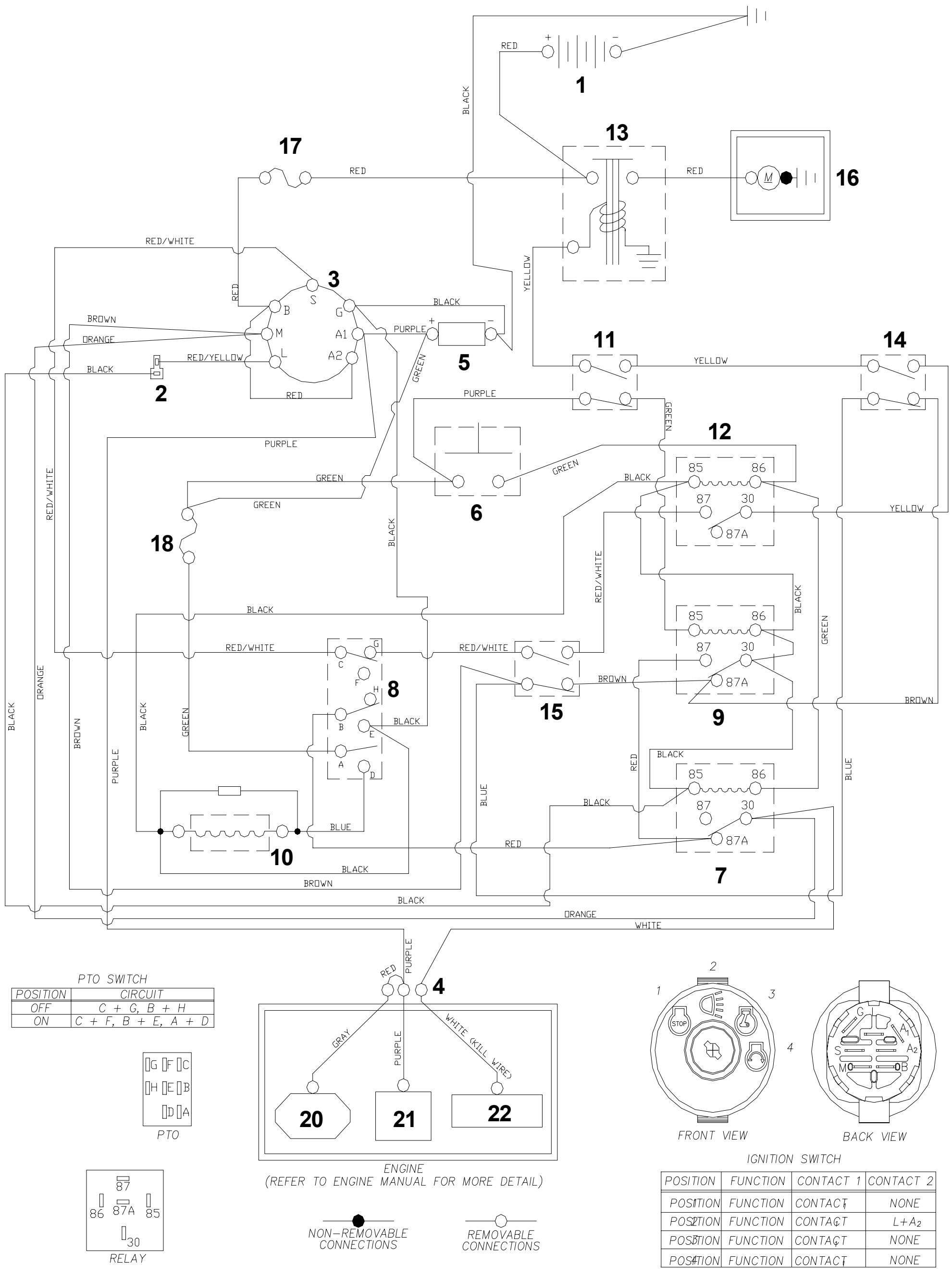
When ordering spare parts, please specify the purchase year, model, type, and serial number.

Always use genuine Husqvarna spare parts.

An annual check-up at an authorized service workshop is a good way to ensure that your machine performs its best the following season.

Wiring diagram

6. Seat unoccupied
8. Blade switch in OFF position
11. Brake switch OFF pos.
14-15. Motion control levers OUT



PTO SWITCH

POSITION	CIRCUIT
OFF	C + G, B + H
ON	C + F, B + E, A + D

IGNITION SWITCH

POSITION	FUNCTION	CONTACT 1	CONTACT 2
POSITION 1	FUNCTION	CONTACT	NONE
POSITION 2	FUNCTION	CONTACT	L+A2
POSITION 3	FUNCTION	CONTACT	NONE
POSITION 4	FUNCTION	CONTACT	NONE

1. Battery
2. Accessory outlet
3. Key switch
4. To engine pigtail
5. Hour meter
6. Seat switch
7. Run relay
8. Blade switch
9. Brake relay
10. Electric clutch
11. Brake switch
12. Start relay
13. Starter solenoid
14. Left motion control lever
15. Right motion control lever
16. Starter
17. 20 AMP fuse
18. 7.5 fuse
19. Diode
20. Voltage regulator
21. Fuel shut-off solenoid
22. Ignition

Technical Data

	EZ4216/968999290	EZ4217/968999291
Engine		
Manufacturer	Honda	Kawasaki
Type	GXV530	FH541V - “KAI”
Power	16 hp	17 hp
Lubrication	Pressure with oil filter	Pressure with oil filter
Oil capacity excl filter	0.95 qt	1.6 qt
Oil capacity incl filter	1.11 qt	1.8 qt
Engine oil, Synthetic Engine oil, Mineral Class	SAE 5W30, 10W30 SAE 30, (winter 10W30) API , SL, SJ	SAE 5W30, 10W30 SAE 30, (winter 10W30) API SF, SJ, SG, SH
Fuel	Min 86 octane unleaded (Max methanol 0%, max eth-anol 10%, Max MTBE 15%)	Min 85 octane unleaded (Max methanol 5%, max eth-anol 10%, Max MTBE 15%)
Fuel tank capacity	5 gallon	5 gallon
Spark plugs / gap	BPR5ES(NGK) or W16EPR-U (DENSO) .030” / 0.75 mm	Champion RCJ8Y .030” / 0.75 mm
Cooling	Air cooling	Air cooling
Air filter	Standard	Standard
Alternator	12 V 16 A	12 V 16 A
Starter	Electric 12 V	Electric 12 V
Transmission		
Transmission	ZT2800 Hydo-Gear	ZT2800 Hydro-Gear
Speed and direction controls	Dual levers, foam gripped	Duel levers, foam gripped
Speed forward	7 mph	7 mph
Speed reverse	4 mph	4 mph
Brakes	Mechanical parking brake	Mechanical parking brake
Front caster tires, Smooth tread	11x4.5-5, 4ply	11x4.5-5, 4ply
Rear tires, Turf pneumatic	18x8.5	18x8.5
Tire pressure, front and rear	15 PSI / 103 kPa / 1 bar	15 PSI / 103 kPa / 1 bar

	EZ4216/968999290	EZ4217/968999291
Equipment		
Cutting width	42”	42”
Cutting height	1.5”- 4.5”	1.5”- 4.5”
Uncut circle	0	0
Number of blades	3	3
Blade length	14 5/8”	14 5/8”
Nose rollers	Yes	Yes
Michigan Seat	Standard	Standard
Hinged armrests	Yes	Yes
Hour meter	Standard	Standard
Blade engagement	Electric Clutch	Electric Clutch
Deck construction	11 gauge w/ 10 gauge skirts	11 gauge w/ 10 gauge skirts
Productivity		
Productivity	2.6 acres/h 10530 m^2/h	2.6 acres/h 10530 m^2/h
Overall dimensions		
Weight	625 lbs.	625 lbs.
Base machine length	72”	69.5”
Base machine width	42”	42”
Base machine height	40”	40”
Overall width, Chute up	43”	43”
Overall width, Chute down	56”	56”

Technical Data

	EZ5221/968999292	EZ4822/968999293
Engine		
Manufacturer	Kawasaki	Briggs and Stratton ELS
Type	FH641V	44K777
Power	21 hp	22 hp
Lubrication	Pressure with oil filter	Pressure with oil filter
Oil capacity excl filter	1.6 qt	1 7/8 qt
Oil capacity incl filter	1.8 qt	2 qt
Engine oil, Synthetic Engine oil, Mineral Class	SAE 5W30, 10W30 SAE 30, (winter 10W30) API , SF, SJ, SH, SG	SAE 5W30, 10W30 SAE 30, (winter 10W30) API SF, SJ
Fuel	Min 86 octane unleaded (Max methanol 5%, max ethanol 10%, Max MTBE 15%)	Min 85 octane unleaded (Max methanol 0%, max ethanol 10%, Max MTBE 15%)
Fuel tank capacity	5 gallon	5 gallon
Spark plugs / gap	NGK - BPR4ES .030” / 0.75 mm	Champion QC12YC .030” / 0.75 mm
Cooling	Air cooling	Air cooling
Air filter	Standard	Cartridge w/pre-filler
Alternator	12 V 16 A	12 V 16 A
Starter	Electric 12 V	Electric 12 V
Transmission		
Transmission	ZT2800 Hydo-Gear	ZT2800 Hydro-Gear
Speed and direction controls	Dual levers, foam gripped	Duel levers, foam gripped
Speed forward	7 mph	7 mph
Speed reverse	4 mph	4 mph
Brakes	Mechanical parking brake	Mechanical parking brake
Front caster tires, Smooth tread	11x4.5-5, 4ply	11x4.5-5, 4ply
Rear tires, Turf pneumatic	18x9.5-8	18x9.5-8
Tire pressure, front and rear	15 PSI / 103 kPa / 1 bar	15 PSI / 103 kPa / 1 bar

TECHNICAL DATA

	EZ5221/968999292	EZ4822/968999293
Equipment		
Cutting width	52”	48”
Cutting height	1.5”- 4 .5”	1.5”- 4.5”
Uncut circle	0	0
Number of blades	3	3
Blade length	18”	16.688”
Nose rollers	Yes + 2 anti-scalp rollers	Yes + 1 anti-scalp roller
Michigan Seat	Standard	Standard
Hinged armrests	Yes	Yes
Hour meter	Standard	Standard
Blade engagement	Electric clutch	Electric clutch
Deck construction	11 gauge w/10 gauge skirts	10 gauge stamped
Productivity		
Productivity	2.6 acres/h 10530 m^2/h	2.6 acres/h 10530 m^2/h
Overall dimensions		
Weight	660 lbs.	605 lbs.
Base machine length	72”	72”
Base machine width	45”	45”
Base machine height	40”	40”
Overall width, Chute up	53”	50”
Overall width, Chute down	66”	63”

Technical Data

	EZ5424/968999294
Engine	
Manufacturer	Briggs and Stratton ELS
Type	44M777
Power	24 hp
Lubrication	Pressure with oil filter
Oil capacity excl filter	1 7/8 qt
Oil capacity incl filter	2 qt
Engine oil, Synthetic Engine oil, Mineral Class	SAE 5W30, 10W30 SAE 30, (winter 10W30) API SF, SJ
Fuel	Min 85 octane unleaded (Max methanol 0%, max ethanol 10%, Max MTBE 15%)
Fuel tank capacity	5 gallon
Spark plugs / gap	Champion QC12YC .030” / 0.75 mm
Cooling	Air cooling
Air filter	Standard
Alternator	12 V 16 A
Starter	Electric 12 V
Transmission	
Transmission	ZT2800 Hydro-Gear
Speed and direction controls	Duel levers, foam gripped
Speed forward	7 mph
Speed reverse	4 mph
Brakes	Mechanical parking brake
Front caster tires, Smooth tread	11x4.5-5, 4ply
Rear tires, Turf pneumatic	18x9.5-8
Tire pressure, front and rear	15 PSI / 103 kPa / 1 bar

	EZ5424/968999294
Equipment	
Cutting width	54”
Cutting height	1.5”- 4.5”
Uncut circle	0
Number of blades	3
Blade length	18 1/4”
Nose rollers	Yes + 2 anti-scalp roller
Michigan Seat	Standard
Hinged armrests	Yes
Hour meter	Standard
Blade engagement	Electric clutch
Deck construction	10 gauge stamped
Productivity	
Productivity	2.6 acres/h 10530 m^2/h
Overall dimensions	
Weight	625 lbs.
Base machine lenght	72”
Base machine width	45”
Base machine height	40”
Overall width, Chute up	56”
Overall width, Chute down	69”

Accessories

BioClip attachment (Mulch kit)

Collection system

Torque Specifications

·Engine crankshaft bolt	50 ft/lb (67 Nm)
·Deck pulley bolts	45 ft/lb (61 Nm)
·Lug nuts	75 ft/lb (100 Nm)
·Blade bolt	45-55 ft/lb (60-75 Nm)
·Standard ¼” fasteners	9 ft/lb (12 Nm)
·Standard 5/16” fasteners	18 ft/lb (25 Nm)
·Standard 3/8” fasteners	33 ft/lb (44 Nm)
·Standard 7/16” fasteners	52 ft/lb (70 Nm)
·Standard ½” fasteners	80 ft/lb (110 Nm)

When this product is worn out and no longer used, it shall be returned to the reseller or other party for recycling.

In order to implement improvements, specifications and designs can be altered without prior notification.

Note that no legal demands can be placed based on the information contained in these instructions.

Use only original parts for repairs. The use of other parts voids the warranty.

Do not modify or install non-standard equipment to the unit without consent from the manufacturer. Modifications to the unit may cause unsafe operations or damage the unit.

CONFORMITY CERTIFICATES

Conformity Certificates

USA reqirements

Labels are placed on the engine and/or in the engine compartment stating that the machine will fulfill the requirements. This is also applicable to special requirements for any of the states (California emission rules etc.) Do not remove any of these labels. Certificates can also be supplied with the machine at delivery or written in the Engine manual. Take care of them as they are valuable documents.

Service Journal

Action	Date, mtr reading, stamp, sign
Delivery Service	
1. Charge the battery.	☐
2. Adjust the tire pressure of all wheels to 15 PSI (1 bar).	☐
3. Mount the steering controls in the normal position.	☐
4. Connect the contact box to the cable for the seat's safety switch.	☐
5. Check that the right amount of oil is in the engine.	☐
6. Adjust the position of the steering controls.	☐
7. Fill with fuel and open the fuel shut off valve.	☐
8. Start the engine.	☐
9. Check that there is drive to both wheels.	☐
10. Check the mower deck adjustment.	☐
11. Check:	☐
The safety switch for the parking brake.	☐
The safety switch for the mower deck.	☐
The safety switch in the seat.	☐
The safety switch in the steering controls.	☐
Parking brake functionality.	☐
Driving forward.	☐
Driving backward.	☐
Engaging the blades.	☐
12. Check the idle speed	☐
13. Check the engine high idle speed	☐
14. Inform the customer about:	Delivery service has been carried out.
The need and advantages of following the service schedule.	
The need and advantages of leaving the machine for service every 300 hours.	No remaining notes.
The effects of service and maintaining a service journal on the machine's resale value.	Certified:
Application areas for Mulching.	
15.Fill in the sales papers, etc.	

After the First 5-8 Hours 1. Change engine oil.	☐

Action	Date, mtr reading, stamp, sign
25-Hour Service 1. Check the fuel pump's air filter. 2. Sharpen/Replace mower blades if required. 3. Check the tire pressures. 4. Check battery with cables. 5. Lubricate according to lubrication chart. 6. Check/clean the engine's cooling air intake. 7. Clean the air cleaner's pre-filter (foam).	

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign
50-Hour Service 1. Perform the 25-hour service. 2. Clean/replace the air cleaner’s filter cartridge (paper filter) (shorter intervals for dusty operating conditions). 3. Change engine oil. 4. Lubricate according to lubrication chart. 5. Check/adjust the parking brake.	

Action	Date, mtr reading, stamp, sign
100-Hour Service 1. Perform the 25-hour service. 2. Perform the 50-hour service. 3. Change the engine oil filter. 4. Clean/replace the spark plugs. 5. Replace the fuel filter. 6. Clean the cooling fins on the engine and transmission. 7. Check V-belts. 8. Check tighten caster wheel axle bolts (every 200 hours). 9. Change the air filter’s paper cartridge.	

Action	Date, mtr reading, stamp, sign
300-Hour Service 1. Inspect the machine. Come to agreement with the customer as to which additional work is to be carried out. 2. Perform the 25-hour service. 3. Perform the 50-hour service. 4. Perform the 100-hour service. 5. Check/adjust the mower deck. 6. Clean the combustion chamber and grind the valve seats. 7. Check the engine valve clearance. 8. Replace the air cleaner’s pre-filter (foam).	

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Action	Date, mtr reading, stamp, sign
At Least Once Each Year 1. Clean the engine's cooling air intake (25 hours). 2. Replace the air cleaner's pre-filter (foam) (300 hours). 3. Replace the air filter's paper cartridge. 4. Change the engine oil (50 hours). 5. Replace the engine oil filter (100 hours). 6. Check/adjust the cutting height. 7. Check/adjust the parking brake (50 hours). 8. Clean/Change the spark plugs (100 hours). 9. Change the fuel filter (100 hours). 10. Clean the cooling fins (100 hours). 11. Check the engine valve clearance. 12. Perform the 300-hour service at an authorized service workshop.	

SERVICE JOURNAL

Action	Date, mtr reading, stamp, sign